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ATEC DIGITAL ADAPTATION STUDY, DEVELOPMENT AND FIELD EVALUATION—ETC(U) AD-A051 927 JAN 78 T J CAMPBELL, W F ACKER, C L CHRISTNER F30602-75-C-0282 1077-14813-VOL-3 RADC-TR-77-431-VOL-3 NL UNCLASSIFIED 1 OF 2 AD A051927 [.....] [::] 1.50 1....1 .

RADC-TR-77-431, Volume III (of three) Final Technical Report January 1978



ATEC DIGITAL ADAPTATION STUDY, Development and Field Evaluation - Digital Automated Technical Control

Mr. T.J. Campbell

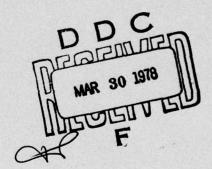
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Because of the size of this report, it has been divided into three volumes. Volume I contains Sections 1 through 5. Volume II contains Section 6. Volume III contains Section 7 and Appendices A and B.

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and software, and verify DATEC's capabilities to accomplish PA/FI/TA in the operational environment of an operating digital transmission system. These DATEC capabilities are directed towards the centralized nodal monitoring of numerous digital transmissions links.

The DATEC field evaluation confirmed both the practicality and advantages inherent in automated digital system monitoring, insofar as enabling the centrally located controller to performance assess, trend analyze and fault isolate the digital transmission system for numerous failure occurrences and patterns and system parameter degradation. DATEC enables technicians to monitor in-service system parameters thereby enhancing system performance and allowing more efficient utilization of maintenance resources.

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Volume III contains Sections 7 and Appendices A and B.

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Section 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 GENERAL

This section presents the conclusions and recommendations that result following the satisfactory completion of the final phase of the ATEC Digital Adaptation Study, the Field Test and Evaluation of the Digital Automated Technical Control (DATEC) equipment, performed in conjunction with the digital transmission communications test bed located at Fort Huachuca, Arizona.

7.2 CONCLUSIONS

The overall conclusion of this report is that the DATEC system successfully completed all requirements of the Statement of Work (S.O.W.). This conclusion is based on the satisfactory adaptation of ATEC hardware and software for digital application as evidenced by test data resulting from execution of the In-Plant Test Plan and Procedures and by the data evaluations presented in Section 2, Field Test Results (Individual Summaries of Tests and Scenarios), and Section 3, Field Test Results Relative to Statement Work Requirements in the Field Test and Evaluation Report. Section 3 of that test report was included in this report (see Section 6), because it addresses S.O.W. compliance directly, and because it provides a complete resume of the field test phase.

The specific objective of the field test was the collection of data to demonstrate confirmation of the tasks that are specified in Paragraph 4.1.12.7 of the Statement of Work. Summarizing those requirements, the field objectives were: (1) gather test data to demonstrate whether the DATEC system satisfied the S.O.W. and system design objectives for PA/FI/TA; (2) perform system level testing to collect data which can be used to evaluate the accuracy, usefulness, and effectiveness of the DATEC system in monitoring a digital transmission link; and (3) make recommendations which will enhance the usefulness and effectiveness of the DATEC system based on field test results. Contract amendment number 5 added as an additional test objective, the demonstration that the DATEC system could be used to monitor non FKV communications equipment by performing add-on field tests using the AVANTEK DR8A radio (DEB prototype) in place of the AN/FRC-162(V) radio.

The field test program successfully satisfied all the S.O.W. requirements and system performance objectives.

Test data recorded during the validation and system scenario evaluation test periods illustrate the adequacy of the monitor points selected by DATEC for monitoring the digital transmission system. Furthermore, the test data demonstrates the usefulness and effectiveness of the DATEC system in accomplishing performance assessment, fault isolation, and trend analysis of the digital transmission system.

The DATEC system ability to accomplish performance assessment and trend analysis was satisfactorily demonstrated and documented without compromise or qualification. The DATEC fault isolation capability was also successfully demonstrated but its success was somewhat diminished by technical controller comments that the system scan rate was not fast enough to satisfy their need for near real time fault isolation unless DATEC is used in the monitor immediate mode. The use of the monitor immediate mode was demonstrated effective during fault isolation but it requires that the normal system scanning be interrupted during its use. The comments relative to scanning rate did not apply to the SSFSS which was shown effective in detecting a loss of service condition and reporting it to the technical controller within 4 seconds regardless of the number of sites under nodal control jurisdiction.

The nodal control concept which would enable a single nodal controller to accomplish PA/FI/TA on a multiple site configuration was confirmed by the system scenario test results. The test results demonstrated the adequacy of the software in accomplishing all system objectives. Also demonstrated was the ease of software maintainability and field modifications afforded by the DATEC software program modularity and top-down structured programming design.

Equipment logs attest to the overall DATEC system reliability and performance. Hardware down time remained less than one day, cumulative, throughout the three month test period ending 30 June. Additional down time was experienced during the add-on testing due to a Caelus Disk problem.

The usefulness of the BEM and EPUT at providing a measure of the system bit error rate was demonstrated during the system scenario testing and the add-on testing. The BEM ability to provide a measure of the system BER to 10^{-15} was shown to be an effective performance assessment measurement which permits a direct indication of system performance in a region previously unmeasurable by any other measuring instrument.

DATEC adaptability to other communications equipment types was successfully demonstrated by the test results from the validation and system scenario evaluation tests performed on the digital transmission system configured with the AVANTEK DR8A Microwave Radio in place of the AN/FRC-162(V) Microwave Radio.

7.3 RECOMMENDATIONS

The field test recommendations address those areas of system operation where the modification or addition of system operating features could add to the overall usefulness and effectiveness of the DATEC system. Additional testing is also recommended which would help answer remaining questions.

Table 7-1 contains the recommended system operating features and their usefulness in enhancing the DATEC system operation.

All of the recommendations listed in Table 7-1 can be accomplished. Many of them require only minor changes to the software. The most difficult is that of increasing the DATEC system scan rate, for this involves both hardware and software changes. Yet, even this is possible.

7.3.1 User Desired Features Not Currently Part of DATEC

The DATEC system S.O.W. and operating objectives addressed those areas judged necessary in performing PA/FI/TA on a digital transmission system. The technical controllers expressed an interest in other system features which were not a part of the DATEC system objectives; however, they represent user preferences and are therefore listed below. These features can be provided by software program additions and are not considered difficult although items 1, 2 and 3 would be somewhat complicated. The features not currently part of DATEC are:

- 1. Generation of DCA reports.
- Circuit, digroup, link and trunk identification numbers with priorities.
- 3. Circuit altroute information.
- 4. Multiple CRTs for technical control and maintenance use.
- 5. Individual VF channel monitoring.
- Long term (90 day) storage of hourly averages of key parameters.
- 7. Remote switching of standby radios and multiplexers.
 (Recommended in the ATEC Digital Adaptation Study Report.)

TABLE 7-1. RECOMMENDED SYSTEM OPERATING FEATURES VERSUS USEFULNESS

Recommended System Features	Usefulness
1. Immediate scan interrupt capability	Allows the nodal controller to gain immediate DATEC system control. Currently, the in-process measurement is completed before the operator gets control.
2. Colocate SSFSS and CRT	System testing confirmed the need to colocate the SSFSS and CRT in order to provide timely, effective system monitoring.
3. Increase system scan rate	Provides more effective usage of system during fault isolation by allowing the system to remain in normal scan instead of going to Monitor Immediate for parameter updates.
4. Update CRT display with a single computer output	Speeds up CRT output display time to an average of 10 seconds per display type, a factor of two improvement over the current method which outputs display formats and data separately.
5. CRT Paging within a single site	Allows the nodal controller to access various site dis- plays using only a single page number.
6. Provide automatic DATEC self-test	Incorporation of a system self-test routine at the end of a scan could minimize DATEC system down time due to faulty DATEC equipment. Current system has self-test by operator command.
7. Telemetry reroute capability	The capability to reroute the telemetry through a 3 kHz channel could help eliminate telemetry down time during an emergency situation.

TABLE 7-1. RECOMMENDED SYSTEM OPERATING FEATURES VERSUS USEFULNESS (Continued)

1	Recommended System Features	Usefulness
8.	Provide fast EPUT and BEM Hits counter time bases	Provides rapid update of FER and Hits during fault isolation testing using Monitor Immediate function.
9.	Constructable Monitor Im- mediate scan sequence	Allows nodal controller to construct his own scan sequence.
10.	Add display type argument to Monitor Immediate command	Allows nodal controller to select display type as part of Monitor Immediate command instead of current method which requires a separate display command.
11.	Provide CRT indication of:	Alerts nodal controller that:
	(1) Monitor Immediate usage,(2) Baseband (A or B) being monitored by BEM	(1) The system is out of normal scan mode,(2) BEM is connected to A or B Radio Baseband.
12.	Show highest level system alarm as part of major alarm warning indicator	Notifies nodal controller of highest level fault in the system.
13.	Add alarm scanner and TlWB1 FER commands to Monitor Immediate	Provides additional fault isolation capability to the nodal controller when using Monitor Immediate.
14.	Add alarm thresholds to the key trend analysis parameters	Provides additional fault isolation information for system degradation analysis.

7.3.2 Recommendations For Future Consideration

Although the field test was successful in all areas explored, it left unanswered, several questions which only an extended operational field test could answer. Included among these are:

- 1. Long term trend analysis evaluation and usefulness
- Technical controller/DATEC interface in an operational multilink environment
- 3. DATEC use and effectiveness in scheduling maintenance
- 4. Usefulness of correlatable parameters
- 5. Usefulness of existing fault isolation capability in an operational multilink environment.

The answers to these questions would provide valuable information for future system specifications and design.

Appendix A EQUIPMENT DESCRIPTION

Appendix A

EQUIPMENT DESCRIPTION

A.1 GENERAL

DATEC consists of selected ATEC equipments adapted to monitor, measure, and analyze the quality of hybrid analog and PCM/TDM data signals. Basic functions are to convert the values of slowly varying dc signals to digital form, sense the status of two-state alarms in the monitored equipment, measure and analyze the signal/noise ratio, and amplitude levels. The DATEC equipment consists of a Test Set, Electronic Systems, AN/GYM-13(V)1, commonly referred to as a Programmable ATEC Element (PATE), configured for inservice voice frequency (ISVF) measurements; a Test Set Group, Communications Circuit, OQ-224(V), commonly referred to as a Measurement Acquisition Unit (MAU) with an adapted analog scanner and adapted baseband monitor option which is referred to as the Baseband Eye Monitor (BEM), and an Alarm-Monitor Group, OD-123(V)/G, commonly referred to as an Alarm Reporting Set (ARS). Input/output terminals supplement these configurations of the DATEC equipment.

A.2 PATE HARDWARE DESCRIPTION

The PATE, Figure A-1, used in conjunction with DATEC, is a computer controlled test set capable of providing continuous automatic performance monitoring and assessment of selected communication circuits. The PATE provides noninterfering, in-service monitoring and assessment of voice frequency (VF) circuits and inputs from digital data monitors. A functional block diagram of PATE is shown in Figure A-2. The PATE is operated in a stand-alone mode. The PATE consists of a standard 19-inch electronic equipment rack which contains a Rack Primary Power Panel, Scanner Power Supply, Scanner, Jack Panel, Signal Parameter Converter, an H-316R Computer, and a Disk Memory Unit. These units are described in the following paragraphs; also reference Figure A-2, PATE Functional Block Diagram.

A.2.1 Rack Primary Power Panel

The Primary Power Panel (Figure A-3) contains a circuit breaker which functions as the rack ON-OFF switch, a pilot lamp, and a set of ac line filters. The panel provides ac power distribution to PATE components by means of a terminal strip to which all other rack units are connected.

A.2.2 Scanner Power Supply

The Scanner Power Supply (Figure A-4) contains a regulated ±5 vdc power supply which provides operating power for the Scanner

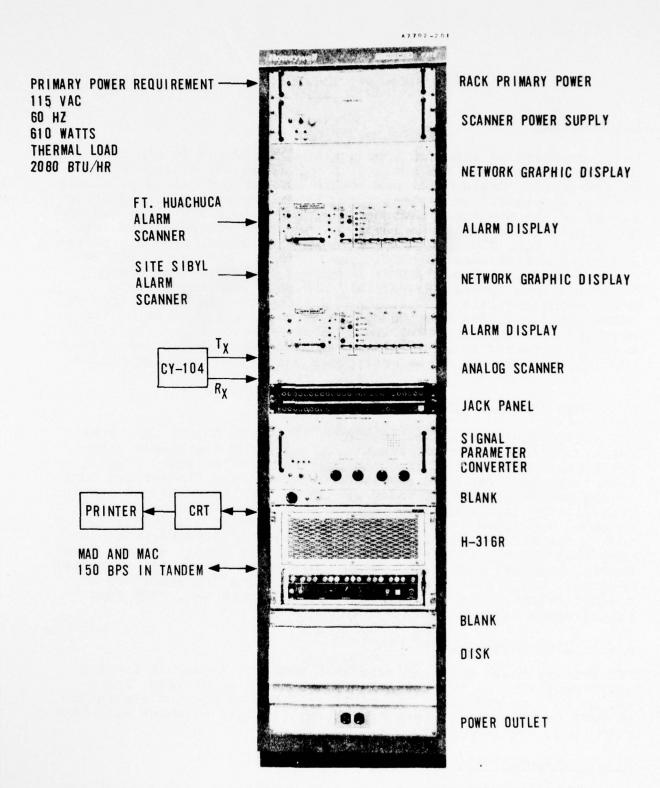


FIGURE A-1. PATE RACK ASSEMBLY, FORT HUACHUCA, ARIZONA

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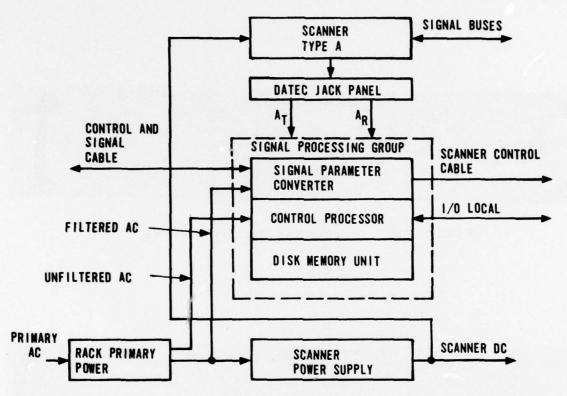


FIGURE A-2. PATE FUNCTIONAL BLOCK DIAGRAM



FIGURE A-3. RACK PRIMARY POWER PANEL

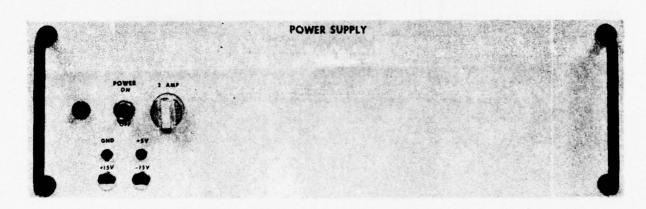


FIGURE A-4. SCANNER POWER SUPPLY PANEL

drawer. A POWER ON switch, 1-ampere fuse, and pilot light are mounted on the front panel. The pilot light indicates both the power ON condition and that the +5 vdc output is available.

A.2.3 Scanner

The Form A Scanner shown in Figure A-5 provides the interface between the communications circuits and the Signal Parameter Converter (SPC). At Fort Huachuca, the scanner is the Form A type.

The Scanner drawer contains one circuit control card, one address decode card, and 10 relay cards. A slot is provided for a scanner test card, one of which is provided with each PATE.

The Form A Scanner relay card has 11 relays. Tenerelays are used to selectively switch data circuits to the SPC. The remaining relay functions as a fail-safe electronic switch to protect the data bus in the event of a relay failure. Collectively, the 10 circuit select relays provide the capability of scanning 100 two-wire Communication Circuit lines (half duplex) which are connected to the two scanner terminal blocks. Monitoring is performed in a noninterfering manner, using a high impedance bridge-on connection. Monitored points of the digital transmission system are automatically selected through these digitally controlled scanners by the PATE program software.

A.2.4 Jack Panel

The Jack Panel shown in Figure A-6 contains two rows of jacks (26 in each row), horizontally oriented, with the transmit functions on the top row and the receive functions on the bottom row. It is used to perform PATE maintenance functions and to manually access and monitor internal data signals and control lines, external data signals and PATE-generated test tones without disturbing circuit configuration or interrupting service.

A.2.5 Signal Parameter Converter (SPC)

The Signal Parameter Converter (Figure A-7) converts monitored channel information to a 16-bit digital word to be transferred to the H-316R computer via an input/output bus. The SPC contains control, measurement, and conversion logic to interface the computer with the MAC, MAD or other selected communication circuits under test. A regulated ±15 vdc power supply furnishes voltage for lamp drivers, relay driver, operational amplifiers, and other control functions. A regulated +5 vdc power supply furnishes logic level voltages. The power supplies are protected against overload and short circuits by current limiting circuits in the output stages and against internal component failure by an internal fuse.



FIGURE A-5. ANALOG SCANNER, FORM A

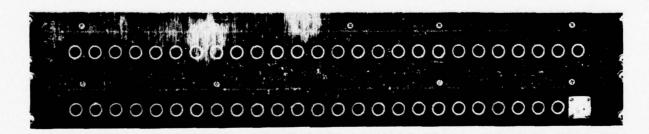


FIGURE A-6. JACK PANEL

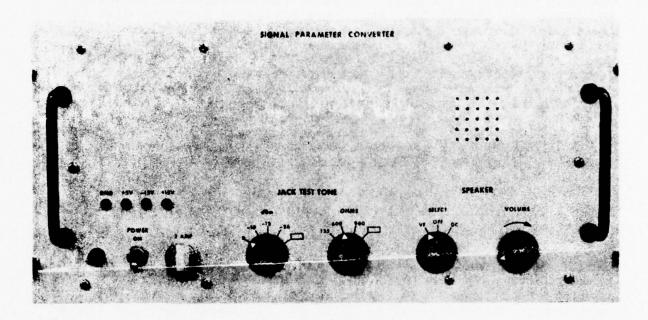


FIGURE A-7. SIGNAL PARAMETER CONVERTER

The SPC drawer also contains input protection circuits to prevent damage from lightning surges, hits on the data lines or from incorrect signals applied through the Jack Panel. The input protection circuits consist of a fused line plus a lightning arrestor.

A.2.6 H-316R Computer

The PATE operating program including the measurement parameters and operating thresholds, etc., are called up from the disk by the H-316R Computer as required to satisfy the functions commanded. Operating switches and displays are located on the computer front panel (Figure A-8). A key lock switch prevents unauthorized operation or manipulation of the logic functions. The computer comes equipped with a 16K core memory stack, high speed arithmetic package, real time clock, auto restart, and base sector relocation capability. The computer input/output (I/O) serial port operates at 1200 Baud. The I/O buffers are compatible with RS-232-C code. The PATE program can be operated either automatically or as an interrupt program through use of a local input/output (I/O) terminal.

A.2.7 Disk Memory Unit

The Disk Memory Unit (DMU) shown in Figure A-9 is a dual, disk cartridge, servo controlled, drive unit and head positioner with one fixed and one removable cartridge. Each cartridge records at 2200 bits per inch (BPI), and has a 48-megabit storage capacity. Each cartridge has two surfaces, providing a total of four surfaces for each disk unit. However, the cartridges are redundant. The DMU provides a total storage capacity of approximately 2.5 megawords of 16 bits each. The DMU is contained in its own enclosure and is suitable for installation in a standard 19-inch electronics equipment rack. A self-contained regulated power supply furnishes all required power supply voltages.

A.3 MEASUREMENT ACQUISITION UNIT (MAU) HARDWARE DESCRIPTION

The Measurement Acquisition Unit consists of power supplies, a Form A Scanner modified to include an events per unit time (EPUT) function, Jack Panel, and the Measurement Acquisition Control (MAC). A functional diagram of the MAU is shown in Figure A-10.

A.3.1 Power Supplies

The Scanner power supplies (2) and the MAC power supplies (2) used in the MAU operate as constant voltage sources and are modular portions of the MAU. Short circuiting of any of the power supply output circuits will not cause failure or permanent damage in the power supply or associated circuitry.

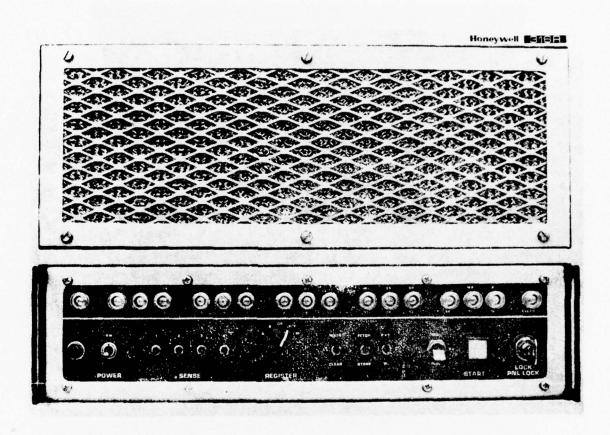


FIGURE A-8. H-316R COMPUTER

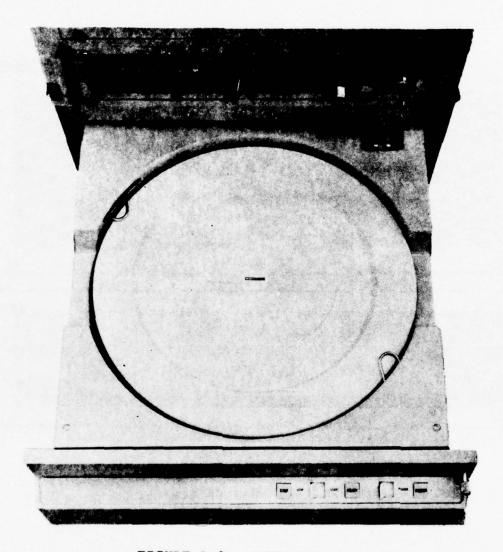


FIGURE A-9. DISK MEMORY UNIT

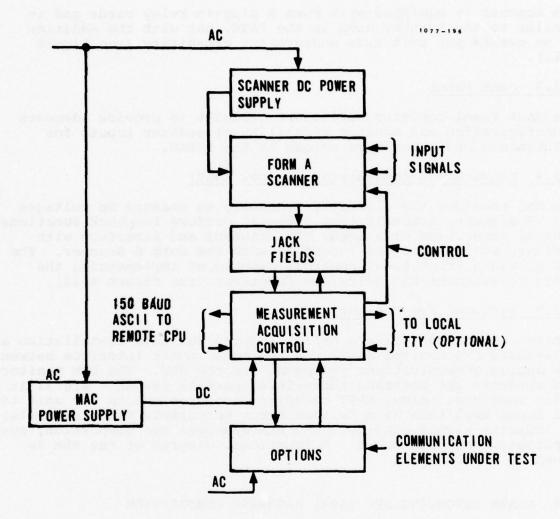


FIGURE A-10. MEASUREMENT ACQUISITION UNIT FUNCTIONAL DIAGRAM

A.3.2 Scanner

The Scanner is equipped with Form A plug-in relay cards and is similar to the Scanner used in the PATE, but with the addition of an events per unit time measurement capability (see Figure A-11).

A.3.3 Jack Panel

The Jack Panel contains sufficient circuits to provide adequate reconfiguration and monitor capability of scanner inputs for maintenance and other uses unique to the DATEC.

A.3.4 Measurement Acquisition Control (MAC)

The MAC provides the circuitry necessary to measure dc voltages and VF signals, transmit test signals, perform loopback functions, control connection of a local TTY, control and interface with options, and control and interface with the Form A Scanner. The MAC provides front panel controls capable of implementing the basic measurement and self-test functions (see Figure A-12).

A.3.5 Baseband Eye Monitor

A Baseband Monitor (Figure A-13), adapted for this installation as a Baseband Eye Monitor (BEM), is the measurement interface between the analog communications equipment and the MAU. The BEM monitors and measures the baseband three-level partial response signal at a radio receiver. Also, EPUT circuitry measures events per unit time and large amplitude hits (within strap selectable time intervals) to indicate signal quality. The BEM measures eye dispersion, eye amplitude, and hits count. A functional diagram of the BEM is shown in Figure A-14.

A.4 ALARM REPORTING SET (ARS) HARDWARE DESCRIPTION

The Alarm Reporting Set consists of the Alarm Scanner, Alarm Display, and the Master Alarm Display (MAD) used in various quantities depending on the individual installation. The Alarm Scanner can stand alone and be used as a local alarm sensor and display. If a remote display is desired, an Alarm Display can be used, driven by the Alarm Scanner. An Alarm Display can also be used with a MAD to select and display alarms from as many as 10 remote Alarm Scanners. A functional diagram of the ARS is shown in Figure A-15.

A.4.1 Alarm Scanner

The Alarm Scanner (Figure A-16) provides the circuitry necessary to scan, detect, and display two-state alarm information; the capability for alarm acknowledgement; and the capability for selftest. The Alarm Scanner provides for connection to an Alarm Display and/or a MAD.

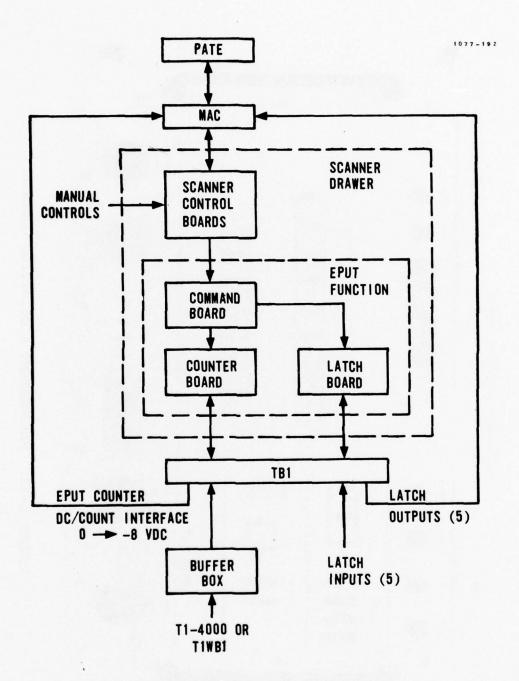


FIGURE A-11. BLOCK DIAGRAM OF SCANNER WITH EPUT FUNCTION

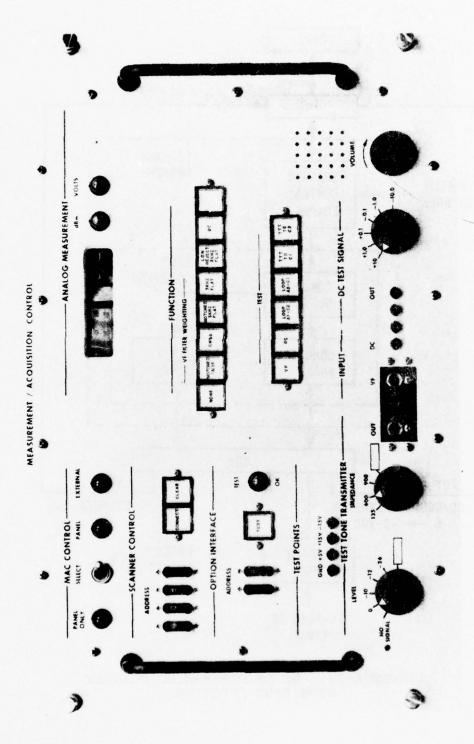


FIGURE A-12. MEASUREMENT ACQUISITION CONTROL



FIGURE A-13. BASEBAND EYE MONITOR

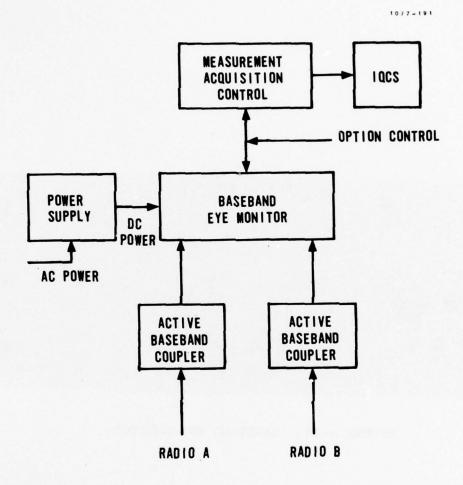


FIGURE A-14. BASEBAND EYE MONITOR FUNCTIONAL DIAGRAM

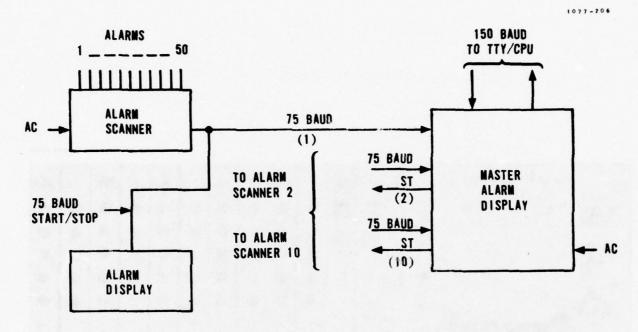


FIGURE A-15. ALARM REPORTING SET FUNCTIONAL DIAGRAM

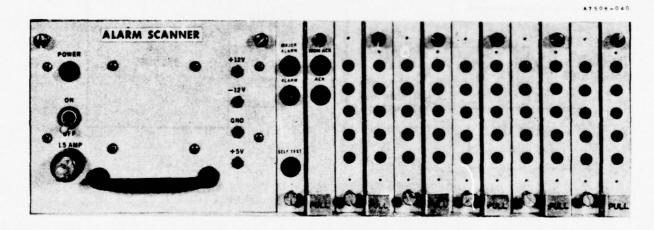


FIGURE A-16. ALARM SCANNER

A.4.2 Alarm Display

The Alarm Display (Figure A-17) provides the circuitry necessary to display alarm states detected by the Alarm Scanner, the capability for alarm acknowledgement, and the capability of self-test. The Alarm Display can be connected to either an Alarm Scanner or a MAD.

A.4.3 Master Alarm Display (MAD)

The MAD (Figure A-18) provides the circuitry necessary to interface with up to 10 Alarm Scanners and display major alarm, any alarm, and alarm nonacknowledged status. The MAD, in conjunction with an Alarm Display, is also capable of displaying the alarm states of a selected Alarm Scanner. The MAD provides the 150 Baud ASCII interface to the modem.

A.5 MODEM

The Modem (Figure A-19) serves as a variable data rate multiplex interface between DATEC and AN/FRC-162 Transceiver. In the transmit direction, the 75 and 150 Bps DATA outputs are summed, frequency-shift key modulated, and translated to 7140 Hz for input to the supervisory orderwire channel of the AN/FRC-162. In receive direction, the orderwire channel output is translated to data rates and selectively filtered for DATEC input.

A.6 PATE SOFTWARE DESCRIPTION

The software package controlling the PATE is divided into system operating and application sets. The system operating set contains the program executive which schedules which and when each application task is to be performed. The application set contains the IQCS modules. The modules perform the appropriate calculations and analyses required for each function.

A.7 OTHER EQUIPMENT

The I/O devices used with DATEC are an ADDS Model 980 CRT Display and Keyboard. It provides 24 lines at 80 characters per line. It provides editing, tab, erase, and insert controls for both individual characters or entire lines. In addition, a General Electric TermiNet 1200B ASR consisting of a printer, keyboard, and paper tape reader/punch as shown in Figure A-20 is utilized to provide hard copy prints of the CRT display and to punch paper tape(s) as needed for inputting data into the DATEC.

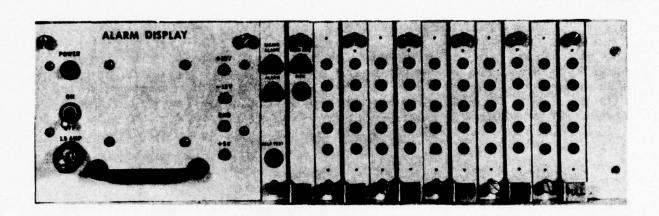


FIGURE A-17. ALARM DISPLAY

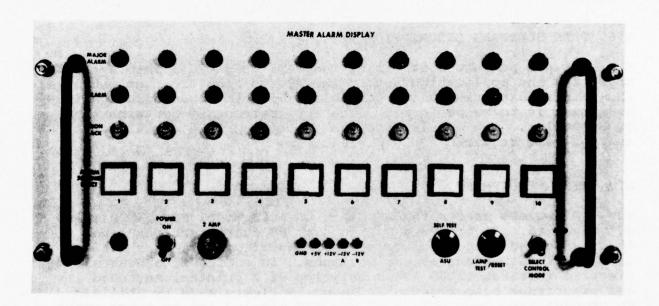


FIGURE A-18. MASTER ALARM DISPLAY

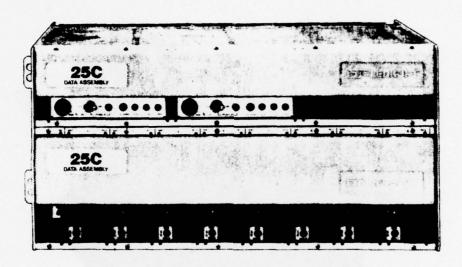


FIGURE A-19. DATA MODEM

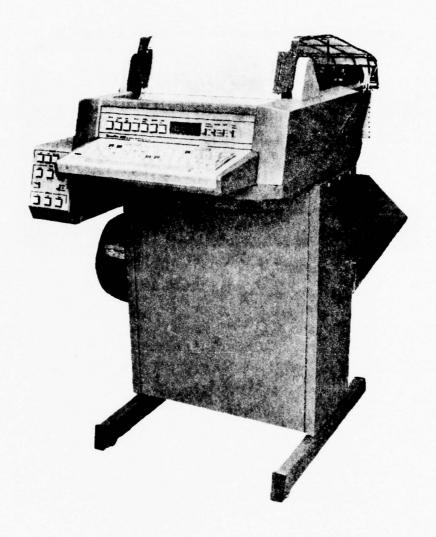


FIGURE A-20. TERMINET 1200 ASR

A.7.1 Printer

The Keyboard Send Receive (KSR) Printer has a keyboard similar to a standard office typewriter. The printer can print and transmit information generated locally by the keyboard or paper tape reader. It can receive information from a remote device (e.g., computer or other communication device) utilizing ASCII. All of the 94 printable ASCII characters can be printed.

The Printer is equipped with the following features:

- a. Rate switch selectable at 15 (LOW), 30 (MED), and 120 (HI) characters per second. For DATEC, the rate is set at HI (i.e., 1200 Baud).
- b. Horizontal Tabulation
- c. Vertical Format Unit (VFU)

A.7.2 Pedestal

The pedestal provides a stable, compact support structure for the TermiNet 1200B Printer and accessories. The paper tape reader and punch are mounted on the left side of the pedestal. The reader and punch power supply and control assembly are mounted within the pedestal and the Reader and Punch Control (R&PC) card is installed in the Printer. The photoelectric tape reader can read and send characters at any rate selected by the Printer "RATE" select switch. The solenoid driver, paper tape punch is capable of operating at a maximum of 30 characters per second with the rate determined by the Printer "RATE" select switch.

A.8 BASEBAND EYE MONITOR (BEM) SCHEMATICS

The 14 figures following present the detailed schematics of the BEM.

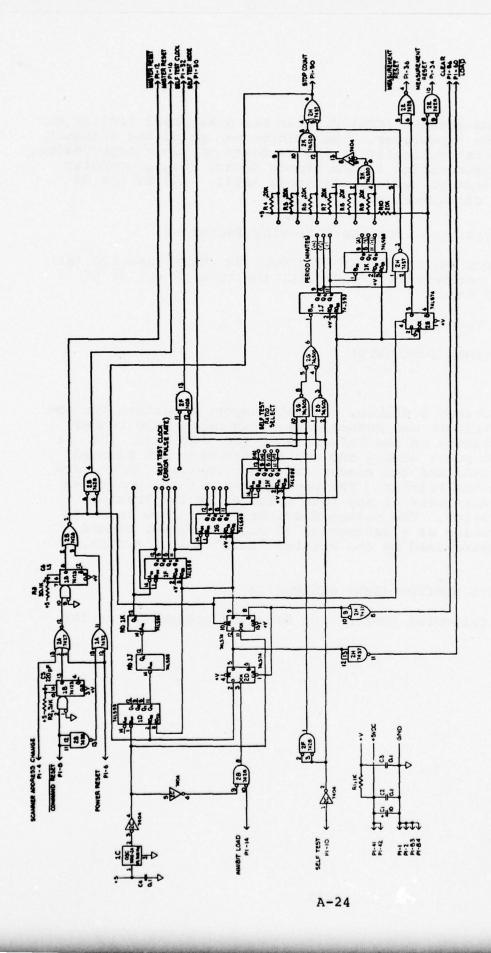


FIGURE A-21. LOGIC DIAGRAM EPUT TIME BASE (A1)

I - UNLESS OTHERWISE SPECIFIED:
PIN IS SPARE LAN HO IS SAD ON 1D, 1F, 15, 1H, 1J, 1K
PIN IS PWER & PIN & IS SAD ON 1B,
PIN IN SPINE & PIN T IS SAD ON 11, ZA, 2B, 2C, 2E, 2F, 2G, ZH, ZK, 2D
RESISTOR VALUES ARE IN ONMS
CAPACITOR VALUES ARE IN WICHOFARDS

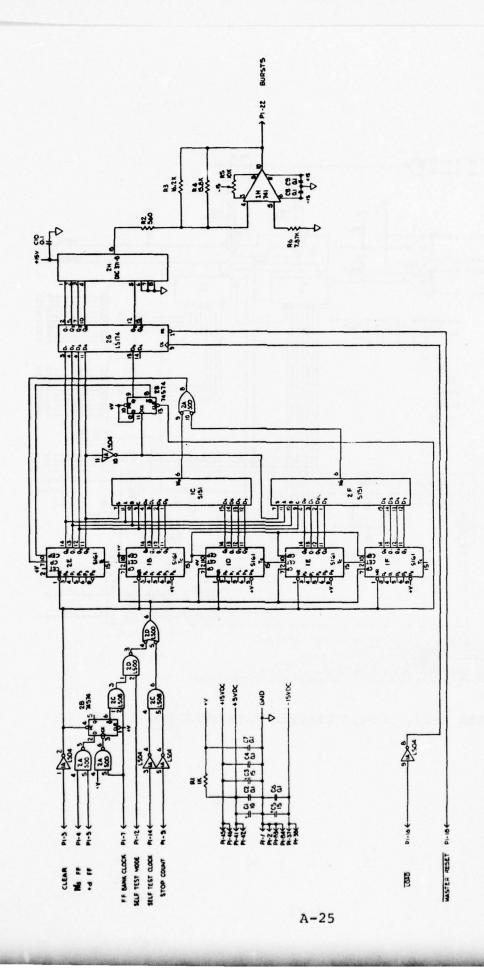


FIGURE A-22. LOGIC DIAGRAM EPUT COUNTER (A2)

I - UNLESS OTHERWISE SPECIFED :
PIN & 15 PARE, IN N & 15 GAD ON 18, IC, IC, IE, IF, 2E, 2E, 2B, PN & 418 SPARE & PIN 1 S GAD ON 14, 28, 2B, 2C, 2D
CAPACITOR WALUES - ARE IN MICHORARADS
PRESISTOR WALUES ARE IN MICHORARADS

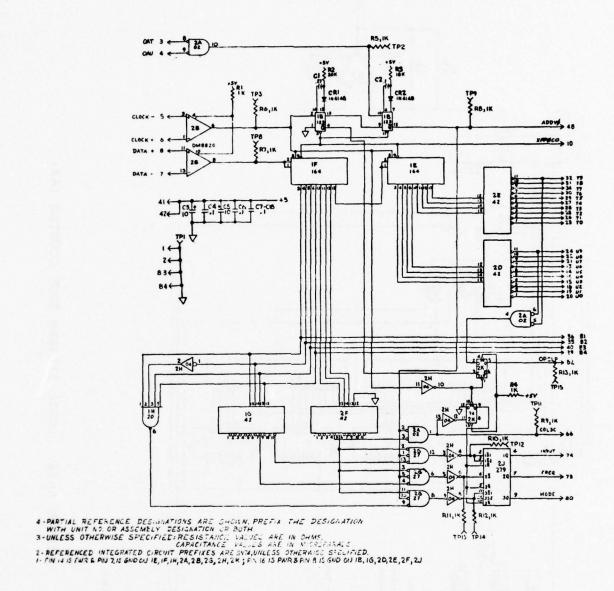


FIGURE A-23. LOGIC DIAGRAM INTERFACE NO. 1 (A3)

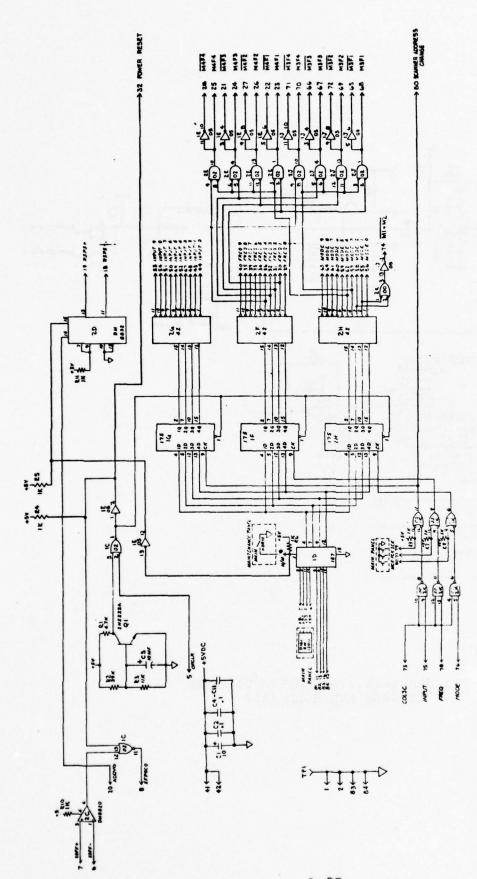
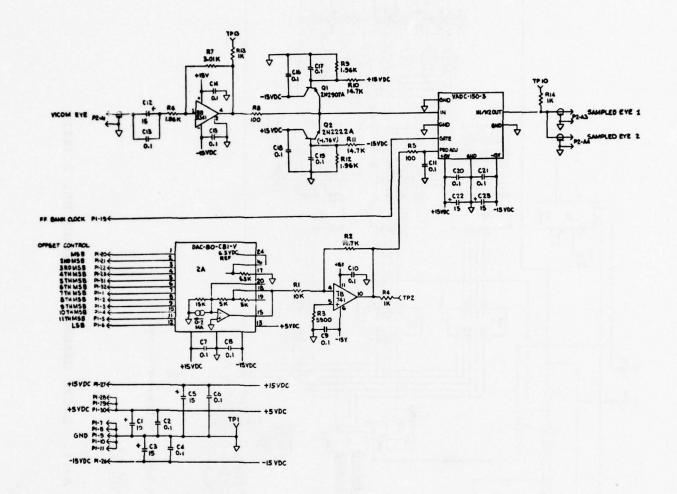


FIGURE A-24. LOGIC DIAGRAM INTERFACE NO. 2 (A4) REPRESENCE ATTEGRATE UNIVERSITATION OF SHE SINGLAND SECURE.



I - UMLESS OTHERWISE SPECIFIED: RESISTOR VALUES ARE IN OHMS CAPACITOR VALUES ARE IN INICROFARADS

FIGURE A-25. SCHEMATIC DIAGRAM SAMPLE AND HOLD (A5)

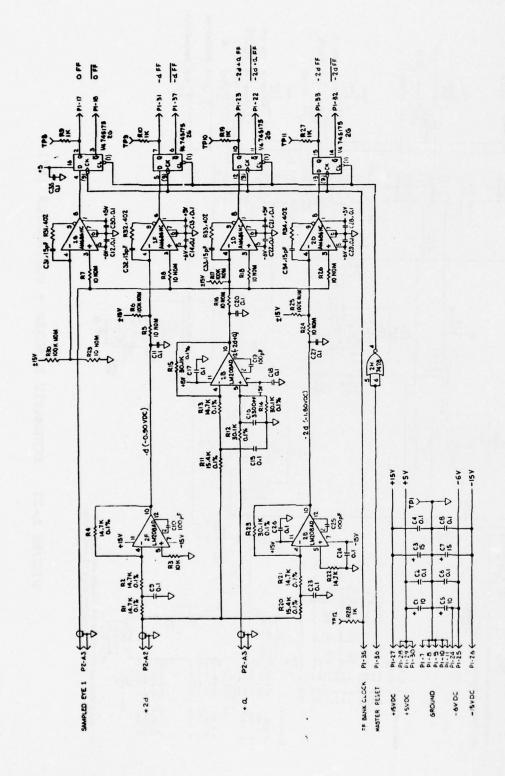


FIGURE A-26. SCHEMATIC DIAGRAM - COMPARATOR (A6)

1- UNLESS OTHERWISE SPECIPIED:
RESISTOR VALUES ARE IN OMMS
CAPACITOR VALUES ARE IN MICROFARADS

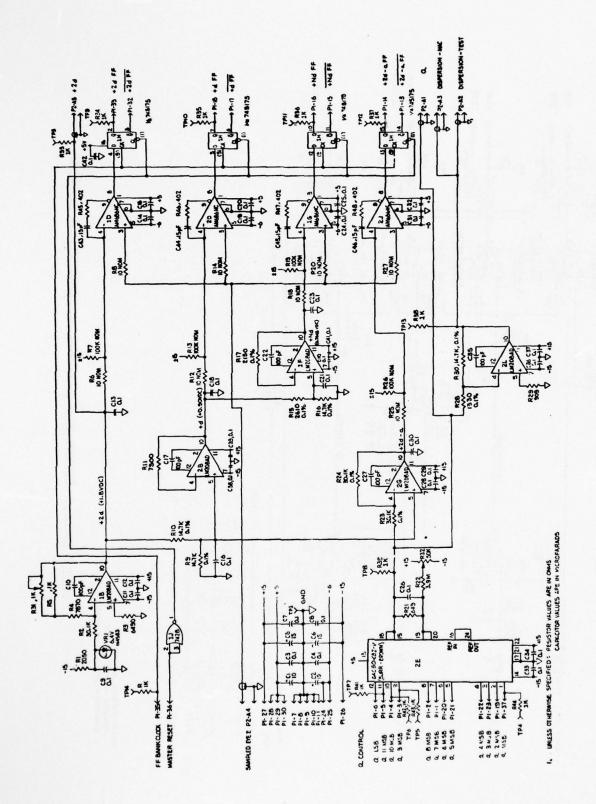


FIGURE A-27. SCHEMATIC DIAGRAM + COMPARATOR (A7)

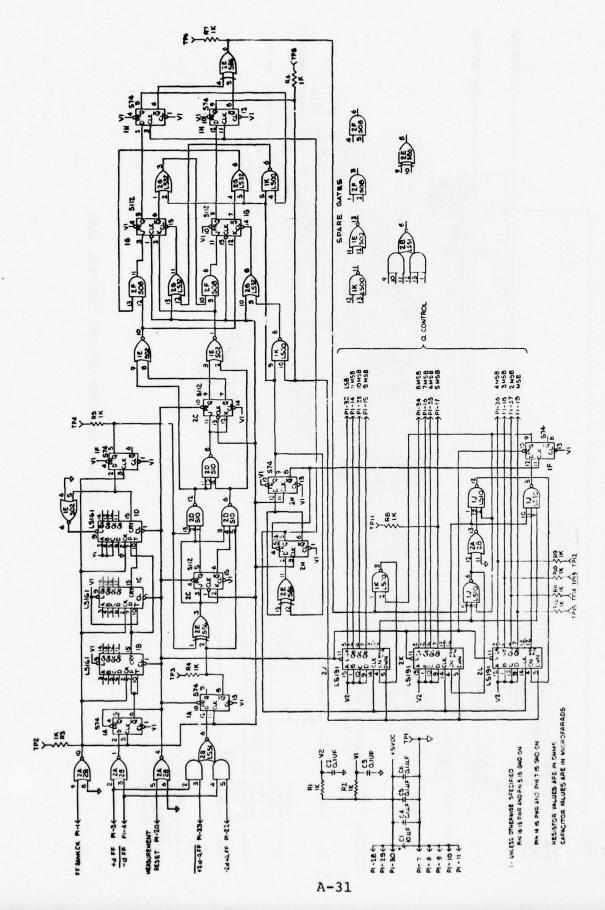


FIGURE A-28. LOGIC DIAGRAM a CONTROL (A8)

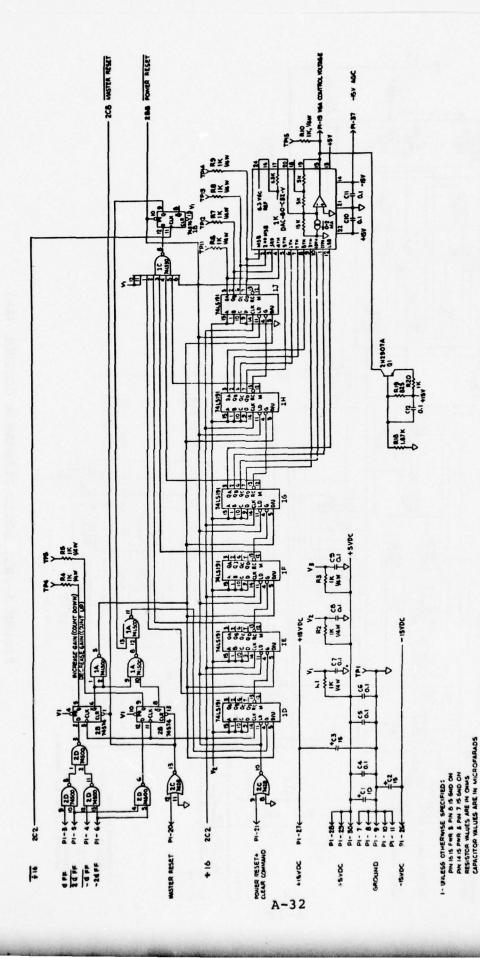


FIGURE A-29. LOGIC DIAGRAM AGC AND OFFSET CONTROL (A9)

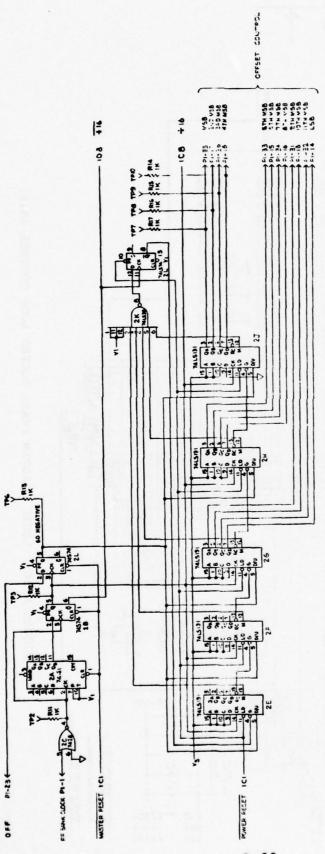


FIGURE A-29. LOGIC DIAGRAM AGC AND OFFSET CONTROL (A9) (Continued)

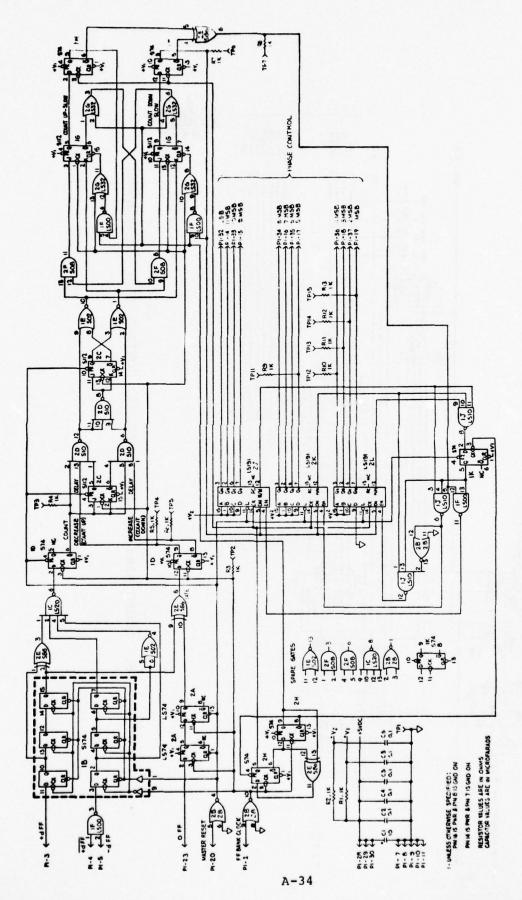
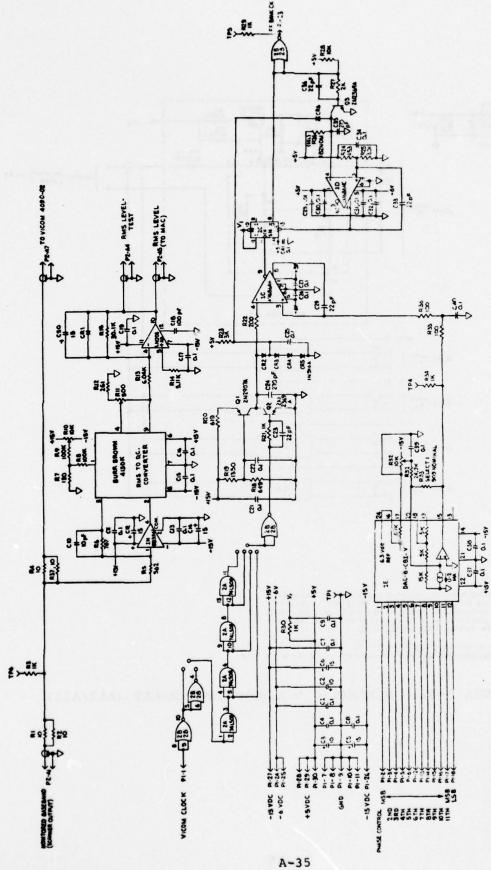
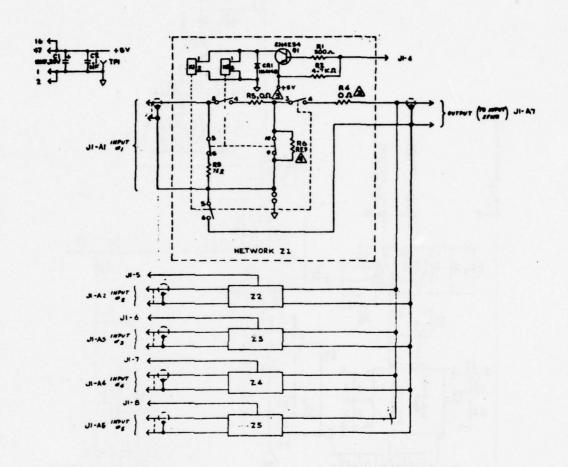


FIGURE A-30. LOGIC DIAGRAM PHASE LOCKED LOOP CONTROL (A10)



SCHEMATIC DIAGRAM INPUT BOARD (All) FIGURE A-31.



2 - PIN 7 15 - ROUND ON K1 & PIN 13 15 GUD ON K2 1 - PARTIAL REF DESIGNATIONS SHOWN - FREFIX WITH ASSY NO. OR UNIT NO OR BOTH

FIGURE A-32. SCHEMATIC DIAGRAM INPUT RELAY (A12/A13)

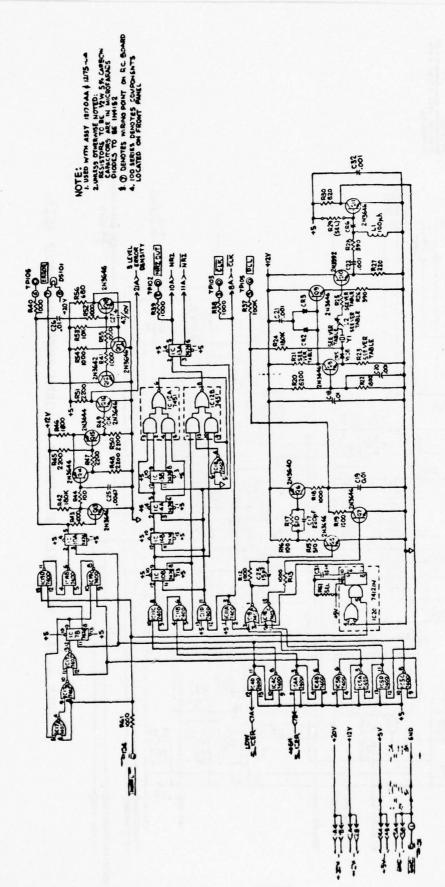


FIGURE A-33. MULTIPLEX SCHEMATIC DIAGRAM RECEIVE INPUT (A14)

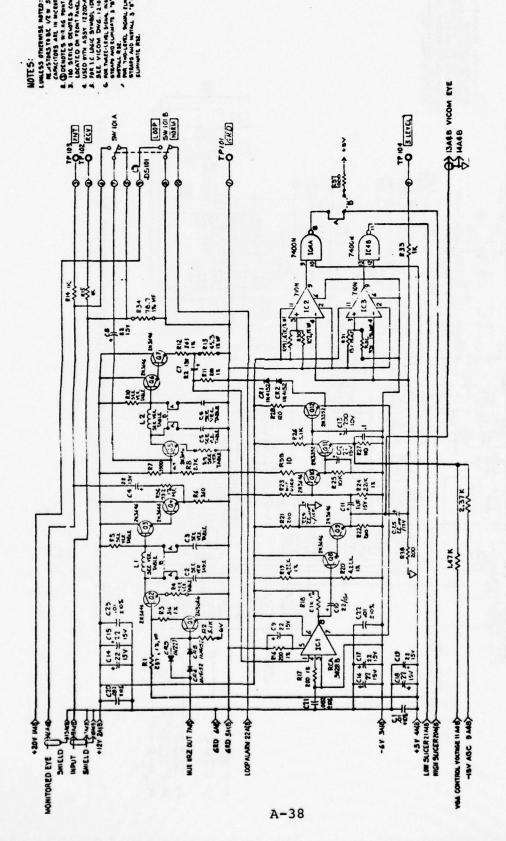


FIGURE A-34. MULTIPLEX SCHEMATIC DIAGRAM INTERFACE UNIT (A15)

A 9 EVENTS PER UNIT TIME (EPUT) SCHEMATICS

The three figures following present the detailed schematics of the EPUT.

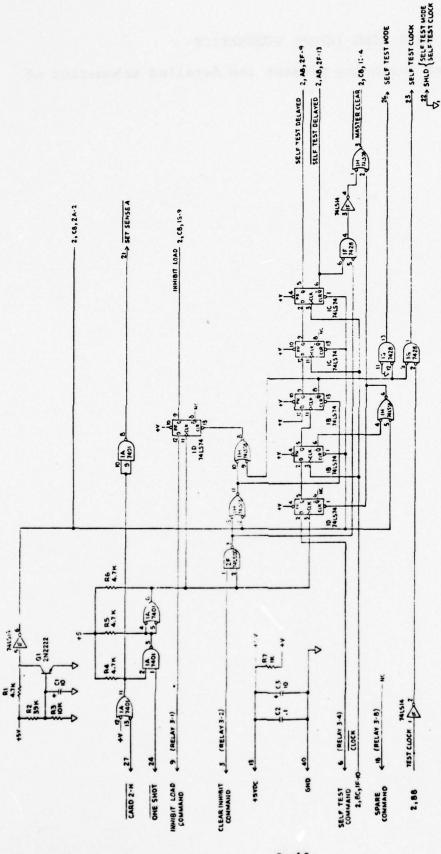


FIGURE A-35. LOGIC DIAGRAM EPUT COMMAND BOARD

4 - ON IE, 28, 2C, 20, 2 E, 26 & 2 H PIN 5 IS +5 V, PIN 10 IS 6ND
3 - ON IA, 18, 1C, 10, II, 1E, 16, 14, 2A, 2F & 21 PIN TIS 6ND, PIN 14 IS +5 V
2 - PARTIAL REFEE FILE OES 16 MATON RES SHOWN PRESIX THE
DESIGNATION WITH WHITH TO OR ASSY OES 16 MATON OR BOTH
I* UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS
CAPACITANCE VALUES ARE IN MERSPEARADS

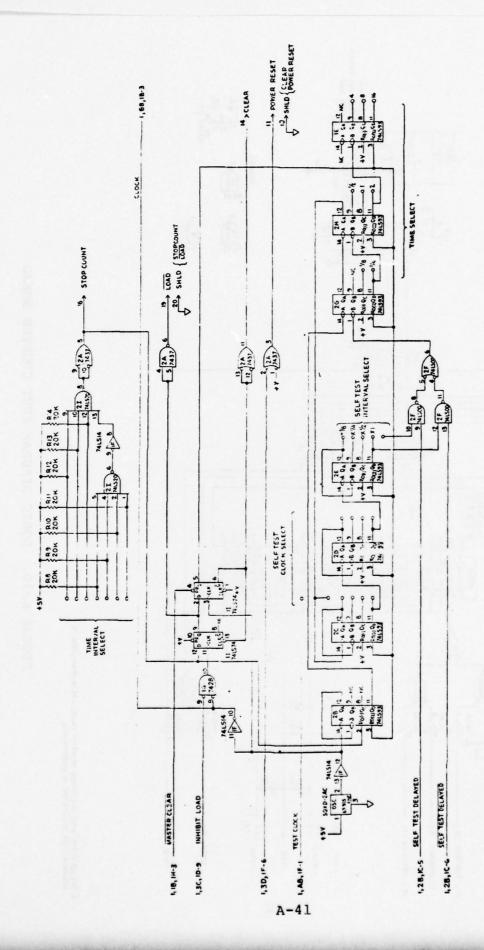


FIGURE A-35. LOGIC MAGRAM EPUT COMMAND BOARD (Continued)

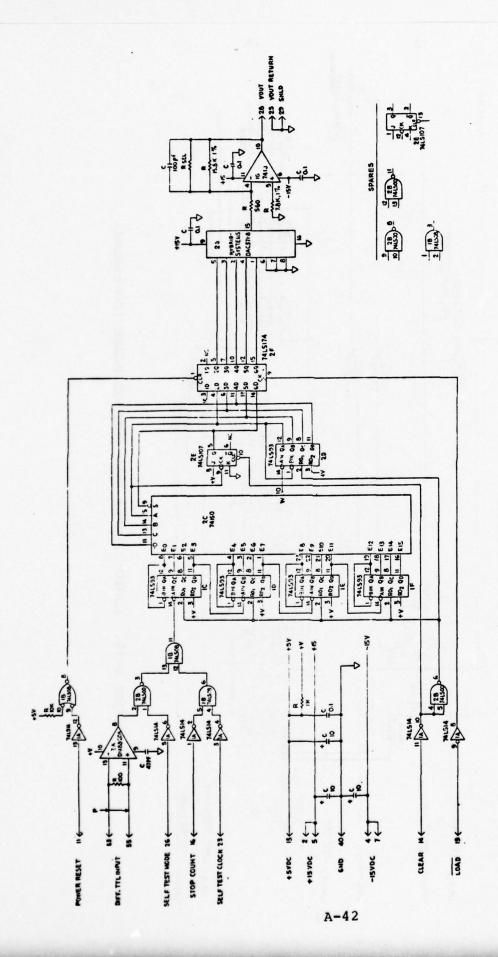


FIGURE A-36. LOGIC DIAGRAM EPUT COUNTER BOARD

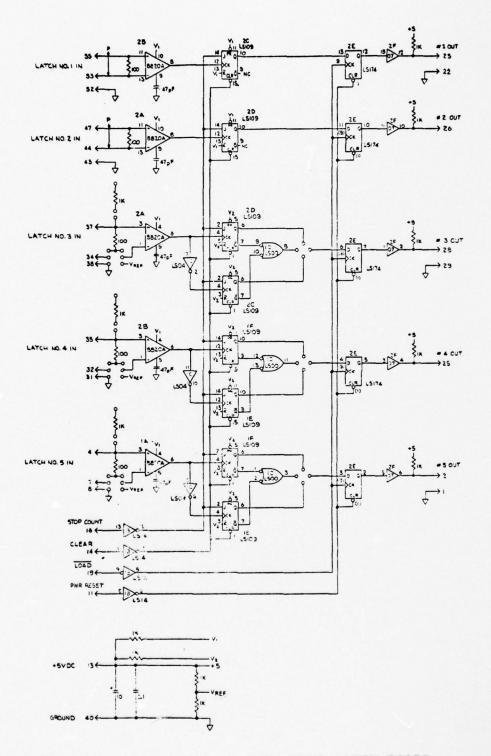


FIGURE A-37. LOGIC DIAGRAM EPUT LATCH BOARD

Appendix B

COMPUTER PROGRAM TO PRODUCE PERFORMANCE PREDICTION TABLES

TRUNK PROGRAM FOR ATEC BASEBAND EYE PATTERN MONITOR

WRITTEN RY DR. W F ACKER. 16 WARCH 1977 REVISION
COMPUTES TABLES FOR DETERMINING THE SIGNAL TO VOISE RATIO AND
PREDICTING THE BIT ERROR RATE OF THE VICOM 4000 FROM THE CUITDUTS
OF THE ATEC ADAPTIVE—THPESHOLD BASEBAND EYE PATTERN MONITOR.

NEFDS SUBROUTINES DNLOLE, ADROLE, AND TABLE NEFDS FUNCTIONS DFYORM, QNORM, AND ZNORMO STORED IN AG3000/NORMAL

ASSUMES A PARTIAL RESPONSE EYE PATTERN WHICH WOULD NOMINALLY HAVE 3 LEVELS BUT BECAUSE OF IMPROPER INTERSYMBOL INTERFERENCE BETWEEN ADJACENT BAUDS EACH NOMINAL LEVEL HAS AN EXTRA LEVEL A DISTANCE EPSILON BROVE NOMINAL AND ANDTHER OFFST BY EPSILON BELOM NOWINAL MAKING 9 TOTAL LEVELS.

DEFINE "HOLAL" TO BE HALF THE NOMINAL DISTANCE BETWEEN LEVELS DEFINE "HOLSE" TO BE THE RWS AMPLITUDE OF THE GAUSIAN NOISE DEFINE "ADAPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE THE NINE DATA LEVELS ARE THEN (+2*DHALF + EPSLN) (+2*DHALF - FPSLN) (2ERO + EPSLN) (2ERO + EPSLN) (2ERO + EPSLN)

THE ABOVE NINE_LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION OF GAUSSIAN NOISE. TO MEASURE THE RHS AMPLITUDE OF THIS NOISE (SO AS TO PROVICE DATA FOR COMPUTING BAUD ERROR PROBABILITIES).
VOLTAGE COMPARIORS. LOGIC, AND COUNTERS ARE USED TO MEASURE THE RELATIVE NUMBER OF BAUDS EXAMINED.
FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN EITHER OF THE FOLLOWING RANGES MILL BE COUNTED AS PSEUDO ERRORS.
FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN EITHER OF THE FOLLOWING RANGES MILL BE COUNTED AS PSEUDO ERRORS.
THE OFFSET THRESHOLD AMPLITUDE "ADAPT" IS CONTINUALLY ADJUSTED BY A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE EQUAL TO THE PRESET RATIO "PER" (A SUBROUTINE INPUT VALUE).
THE AMPLITUDE OF THE PSEUDO FRROR THRESHOLD. "ADAPT", IS THEN USED (WITH THE AID OF TOOLS SOUTH AS THIS PROGRAM') FOR SIGNAL TO NOISE RATIO TREND ANALYSIS AND PREDICTION OF RIT ERROR RATE.

(NAMES ENDING IN "M" DESIGNATE ARRAYS) FXTERNAL VARIABLES

	BITS TRANSM	SEUDO ERROR	JOO ERRORS A	FING ADAPT.	RANSMITTED	S . NBR ROW	OL INTERFERE	HALF	JES & NUMBER	STANT FOR AN	SISE RATIOS	VOLTAGE RAT	MS SIGNAL R	IO IN DECIBE	TO D RATIO	TH RESPECT	JASTLINEAR T
4. BIT RATE	1* PSEUDO BIT ERRORS /	SA BITS TRANSMITTED /	1* NUMBER THAT NET PSEUDO ERRORS A	BY BEFORE THE A/D CONVERTER SETTING ADAPT,	1. BIT ERRORS PER BIT	14 NUMBER OF BERM VALUE	14 AMPLITUDE INTERSYMBOL INTERFERE	DECISION LEVEL RATIO . EPSLN /	1* NUMBER OF ATORY VALUES = NUMBER	IN . AIDRMINTABLE CON	1+ DECISION LEVEL TO NO	IN RMS SIGNAL TO DHALF	1. RMS NOISE TO TOTAL	IN SIGNAL TO NOISE RATIO IN DECIRE	14 ADAPTIVE THRESHOLD	IN DERIVATIVE OF PER WITH RESPECT	IS ADAPTIVE THRESHLD OF
BITRATE	PER	PERINVRS	RDIVEAD		BERM(72)	NBER	AIDRM(25)		MAIDR	AIDR	DNR	SDHR	NSRM(72)	SNRM(72)	ADRM(72)	DPERDADM(72)	TMCNSTM(72)
REAL	REAL	REAL	PEAL		REAL	35	REAL		INTEGER				PEAL	PEAL		PEAL	

SCRATCH PADS FOR TEMPORARY STOR

INTERNAL VARIABLES SCOATCH.T

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INTEGER NOON

RED. STATCH

COMMAILE INTEGER NOON

RED. STATCH

COMMULE INTEGER NOON

RED. STORE

COMMULE INTEGER NOON

RED. STORE

CALL TABLE SEED NOON

RED. STORE

INTEGER INTEGER NOON

INTEGER INTEGER NOON

INTEGER INTEGER NOON

CALL LARGE INTEGER NOON

INTEGER INTEGER NOON

CALL LARGE INTEGER NOON

CALL TABLE INTEGER NOON

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THE ABOVE WINE-LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION OF GAUSSIAN NOISE. TO MEASURE THE RMS AMPLITUDE OF THIS NOISE (SD AS TO PROVIDE DETA FOR COMPUTING BAUD ERROR PROBABILITIES). VOLTAGE COMPARITORS, LOGIC, AND COUNTERS ARE USED TO MEASURE THE RELATIVE NUMBER OF BAUDS DETECTED WITHIN "PSEUDO ERROR" DEFECTION AMPLITUDE RANGES PER TOTAL NUMBER OF BAUDS EXAMINED.

FOR THIS SUBGROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS.

FROM ("DHALF") TO ("2*OHALF" ADAPT")

THE OFFSET THRESHOLD AMPLITUDE "ADAPT" IS CONTINUALLY ADJUSTED BY A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE FOULD. TO THE PRESET RATIO" PERROR" IS ADDROVING INDUIT VALUE.

THE AMPLITUDE OF THE PSEUDO ERROR THRESHOLD. "ADAPT". IS THEN USED WITH THE AID OF TOOLS SUCH AS THIS PROGRAW! FOR TREND ANALYSIS AND PREDICTION OF BAUD ERROR RATE ("BER" IN SUBROUTINE DNROVE")

INPUT VARIABLES

1* FOR DIAGNOSTIC PRINTOUT SET DEB
1* COUNTS NEWTON-RAPHSON ITERATION
1* NEWEST GUESS FOR VALUE OF ("ADA
TO ATTAIN THE SPECIFIED ERROR RATE
1* INTEGER MULTIPLES OF "ONR"
1* INTEGER MULTIPLES OF "ONR"
1* INTEGER MULTIPLES OF "ONR"
1* DESIGNATIVE OF "OR" WITH REPFE
1* NATURAL LOG OF "PER" (THE TARGE
1* NATURAL LOG OF "PER" (COMPUT
1* ALNPERNEW LOG OF "PERNEW" (COMPUT
1* ALNPERNEW STORAGE FOR SCRATCH P
1* DEPIVATIVE OF "LNDERNEW" WITH R 1* AMPLITUDE INTERSYMBOL INTERFERE 1* DATA TO MOISE RATIO = (DHALF) / RATIO. EPSLN / DHALF 1* VALUE OF PRESET PSEUDO ERROR RA ADAPTIVE THRESHOLD TO "D" RATIO DERIVATIVE OF "PER" WITH RESPEC .. INTERNAL VARIABLES ADR DERNEW DDERDANR LNTARGET LNTARGET ERRINDER ERROLEW THING DINDERDA DEBUG/F/ NRAPHSON REAL DI.DZ.D3.D4 OUTPUT VARIABLES AIDR PER LOGICAL DINTEGER REAL REAL REAL :: U

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THING =

DENORM( +A.E) + 2.*DENDRM( +A) + DENORM( D2.A.E)
+ 2.*DENORW(D2.A.E) + 4.*DENORM(D2.A.) + 2.*DENORW(D2.A.E)
TERNS OF THING RELOW THIS COMMENT CARD ARE NEGLECTED
+ DENORM(D4.A.E) + 2.*DENORM(D4.A.E) + DENORW( .A.E)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADJUST THE ANR VALUE BY NEWTOW-RAPHSON
ITERATION USING ALGORERNEW-PER, RATHER THAN
ICERNEW-PER, FOR THE FRROW TERM TO REDUCE
SCALING PROBLEMS AND IMPROVE CONVERGENCE.
Correspondences to the contract of the contrac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NEWTON RAPHSON CORRECTION. IF ANY, COMPLETED NOW EVALUATE THE RESIDUAL FPROR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14 SKIPS THIS NEWTON RAPHSON CORRECTION ONLY THE FIRST PASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOTICE (-0.5*LNTARGET) 15 POSITIVE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USE FULL-SIZED CORRECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USE LIMITED CORRECTION TO REDUCE OVERHOOT TENDENCY A = A - LNPERVEW / DLNPERDA ENDIF NRAPHSON = NRAPHSON + 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A . A - ERRLYPER / DLNPERDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DPERDANR = -THING / 8.
DLNPERDA = DPERDANR / PERNEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NRAPHSON = 0
ERROLD = 1200.
ERRNEW = 1100.
DOWHILE ( ERRNEW -LT. ERROLD )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IF ( ERRNEW .LT. 1000. )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADR = ANROLD / DNR
DOFRDADR = DPERDANR * DNR
RETURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THING =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENDO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -2
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TRUE GIVES DIAGNOSTIC PRINTOUT
COUNTS NEWTON_RAPHSON ITERATIO
NEWEST APPROX TO DNR VALUE FOR
PREVIOUS VALUE OF DNRNEW
(BIT ERROR RATE COMPUTED FOR D
IBERNEW - BERN * 1.8-10 TO AV)
ABSOLUTE VALUE OF ERRBER USING
PREVIOUS VALUE OF ERRBER
DERIVATIVE OF BERNEW
                                                                                                                                                                                                                                                                                                                                                                                       1* (BAUDS IN ERROR) / (BAUDS TRANSM
1* (AMPLITUDE OF INTERSYMBOL INTE
WHFRE 2D & NOMINAL DISTANCF BETWEEN LEVELS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IMPROVE FIRST APPROXIMATION OF DNR BY NEWTOW-RAPHSON ITERATION OF ERROLD = 10.E+10 ERROLD = 2.E+10 ARAPHSON = 0.E+10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D / RMS NOISE AMPLITUDE. D DEF
SUBROUTINE DNR9LE(BER, AIDR, DNR)

( DATA-NOISE RATIO FOR NINE-LEVEL EYE )

DETERMINES DATA-NOISE RATIO (DNR) REQUIED TO PRODUCE SPECIFIED

BIT FROM RATE (DNG THREE LEVEL PARTIAL RESONNSE EYE PATTERN
WITH INTERSYMBOL INTERFERENCE (OF AMPLITUDE AIDR) DISTORTING THE
THREE-LEVEL EYE INTO A NINE-LEVEL EYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 + 6. * GNORM( DNRNEW * (1.-AIDR) )
+12. * GNORM( DNRNEW * (1.-AIDR) ) / 16.

+ 6. * DORDM( DNRNEW * (1.-AIDR) ) / 16.

FRRBER * BERNEW * 1.F.10 - 8FR * 1.F.10 OLY THE FIRST PASS FROLD * ERROLD * ERREW * ABS(ERREP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IN SKIPS THIS ONLY THE FIRST PASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IFIDEBUGIPRINT,"NRAPHSON """NRAPHSON,"ERR RER #1.E+10 =".ERRBER
Nraphson = nraphson + 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOWHILE ( ERRNEW "LT. ERROLD ) :* SKIPS THIS ONLY THE FIR DANASHSON. GT.O ) :* SKIPS THIS ONLY THE FIR DANASHS = 6. * DFNORM! DNRNEW * (1.-AIDR) ) * (1.-AIDR) * (1..-AIDR) ) * (1.-AIDR) ) * (1.-AIDR) ) / ONGOLD * DNRNEW * (1.-AIDR) ) * (1.-AIDR) ) / DNROLD * DNRNEW * (1.-AIDR) ) / FNDIF FNDIF * (1.0AIDR) * (1.0AIDR) ) / FNDIF FNDIF * (1.0AIDR) * (1.0AIDR) ) / FNDIF FNDIF * (1.0AIDR) * (1.0AIDR) ) / FNDIF * (1.0AIDR) * (1.0AIDR) * (1.0AIDR) ) / FNDIF * (1.0AIDR) * (1.0AI
                                                                                                                                                                                                                                                    NEFDS DFNORM. GNORM. AND ZNORMO (IN "NORMAL" FILE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :
                                                                                                                                                                                                                                                                                                                       INPUT VARIABLES --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INTERNAL VARIABLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEBUG/F/
NRAPHSON
DNRNEW
BERNEW
ERRNEW
ERROLD
DRVBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNR - DNROLD
RETURN
FHD
                                                                                                                                                                                                                                                                                                                                                                                          BER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OUTPUT --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOGICAL
INTEGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REAL
                                                                                                                                                                                                                                                                                                                                                                                          PEAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             000
                                                 0000000000
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EXTERNAL REAL REAL REAL REAL REAL REAL REAL RE	SNAL		HTI N. A. MENEDITH	OCT 1976
REAL REAL REAL REAL REAL REAL REAL REAL		VARTABLES	I NAMES ENDING IN "M"	DESIGNATE ARRAYS)
REAL REAL REAL REAL REAL RAE INTEC		ADRM (72)	14 AMPLITUDE	THRESHOLD TO D RATIO=
PEAL PEAL PEAL PATE INTER PORM		BERM (72)	IN BIT ERROR	14 BIT FROMS DER BIT TRANSMITTED
REAL REAL INTER INTER INTER INTER INTER		NSR4(72)	IN RMS NOISE	TO TOTAL RMS SIGNAL
REAL NATE INTER INTER	•	PERINVPS SNRM (72)	IN SIGNAL TO	ISMITTED / PSEUDO ERR
INTER INTER INTER INTER		THCNSTH(72)	IN ADAPTIVE	THRESHLD QUASILINEAR
INTER INTER INTER	*	RDIVBAD	S* NUMBER	THAT NET PSEUDO ERRORS A
INTE INTE INTE	MAL	NTERNAL VARIABLES	BY BEFORE THE A/D CO	IVERTER SETTING ADAPI
INTE		2000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3
FORM		NROW	TANDER DE	STEP FOR NIMBER OF
FORM		ILINE N: INF	IN LINE COUNTER	INF SPACE
FORM				
		STATEMENTS		
FORMAT		(141)		
FORMAT				
FORMAT	25	(24X."BASEBAND	FYE PATTERN MONITOR TO	TABLES")
FORMAT	=	H .23X. *PSEUD	O ERROR RATE EQUALS	1.0 /*. 69.0)
Ĕ	1	HO.8X. BIT ER	ROR 6x N / S" . 7x . " S!	R".7X."A / D".6X.
FORMAT	ATIC	H .11X. RATE	DERIV PER . IN. TATE 8X. "RATIO" . 6X. "IN DB" . 6X. "RATIO" . 6X	.6X."RATIO".6X.
EDOMAT	4 T	A / D".5X."(CONSTANT")	TANT")	
FOOMA		(1H)	. 19.61.3613.61	
FORMAT		(8X."NOMENCLATURES"		
9	17 (8	RMAT (8X."D	THE TALE OF THE NO	THREE LEVEL EVE ".
2 .1.		"1.E. DECISION LEVEL."		
2	47 (8	18X."N / 5 9ATI	. RMS NOISE TO	AMS SIGNAL RATIO.")
FORMAT	1 6	PART (BX."SAR	STONAL POWER TO	NOTSE POWER IN ".
FOPH	AT (8	FORMAT (8X."A / D RATIO	•	ADAPTIVE THRESHOLD AMPLITUDE TO ".
FORMAT	KAT	RATIO. ")	* DERIVATIVE OF	DAE IND ERROR BATE ".
3	H	WITH RESPECT TO A / D	/ 5 RATIO.")	
FOR	1404	VE THRESHOLD	ANT = DUASILINEAR TI	OLANGES ABOUND
	AND	FREDR SIGNAL"	"STEADY STATE VALUES", 1.25% "WHEN BITE RATE = "FI4.0" AND FRROR SIGNAL", 1.25% "DIVIDER RATIO INTO DIA CONVERT	E E "FI4.0"
	F	= ".F14.0)		
FORMAT	AT IB	E 70 0	* AMPLITUDE OF IT	INTERSYMBOL".
	****	***************************************		***************************************

R-6

WRITE (6.1)
WRITE (6.2)
WRITE (6.2)
WRITE (6.3)
WRITE (6.4)
WRITE (6.5)
WRITE (6.5)
WRITE (6.8)
WRITE (6.8)
WRITE (6.8)
WRITE (6.8)
WRITE (6.10)
WRITE (6.10)
WRITE (6.10)
WRITE (6.11)

ILINE # 0

LASTROM # MIN(NROW+36, NBFR)

DOUBLE SPACE IF NUMBER OF DATA ROW OF DATA ROWS LE.IS

WRITE (6.11)

IL NE # ILINE * 1

FLAST CONDOLE SPACE IF NUMBER OF DATA ROWS LE.IS

WRITE (6.11)

IL NE # ILINE * 1

FLOOR # ILINE * 1

FLOOR # ILINE * 1

FNDO

NINE # NINE * 1

FNDO

WRITE (6.12)
WRITE (6.13)
WRITE (6.13)
WRITE (6.14)
WRITE (6.15)

U

THERE WERE NO ERRORS IN THE ABOVE ROUTIN DETECTED BY THE SP PRECOMPILER

AND THE SAME OF A THIS AROU IN EAST-

PREFORTY NOW PROCESSES THE "INCLUDE" TATEMENT, SO THAT
COMMON STATEMENTS CAN BE WRITTEN ONCE PUT AT THE BEGINNING
OF THE SOURCE INPUT, AND THEN INCLUDED IN SPECIFIC ROUTINES.
ALSO, COMMENTS PRECEDED BY IN ARE MOVED OUT TO COLUMN 40.
TWO ADDITIONAL SP STATEMENTS HAVE BEEN MECHANIZED. THEY ARE

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B-8

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LABEL				
TRUNK PROGRAM FOR ATEC BASEBAND EYE PATTERN MONITOR	TRUNK PROGRAM FOR ATEC BASEBAND EYE PATTERN MONITOR WRITTEN BY DR. W F ACKER. 16 MARCH 1977 REVISION COMPUTES TABLES FOR DETERMINING THE SIGNAL TO NOISE RATIO AND PREDICTING THE BIT ERROR RATE OF THE VICOM 4000 FROM THE OUTPUTS OF THE ATEC ADAPTIVE-THRESHOLD BASEBAND EYE PATTERN MONITOR. NFFDS SUBROUTINES DNL9LE, ADR9LE, AND TABLE NEEDS FUNCTIONS DFNORM, ONORM, AND ZNORMO STORED IN A03000/NORMAL	ASSUMES A PARTIAL RESPONSE EYE PATTERN WHICH WOULD NOMINALLY HAVE 3 LEVELS BUT BECAUSE OF IMPROPER INTERSYMBOL INTERFERENCE BETWEEN ADJACFYT BAUDS EACH NOWINAL LEVEL HAS AN EXTRA LEVEL A DISTANCE EPSILON ABOVE NOMINAL AND ANOTHER OFFSET BY EPSILON BELOW NOMINAL MAKING 9 TOTAL LEVELS. DEFINE "DHALF" TO BE HALF THE NOMINAL DISTANCE BETWEEN LEVELS DEFINE "EPSLN" TO BE FPSILON DEFINED ABOVE DEFINE "ADAPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE (+2*DHALF + EPSLN)	THE ABOVE NINE—LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION OF GAUSSIAN NOISE. TO MEASURE THE RMS AMPLITUDE OF THIS NOISE (50 AS TO PROVIDE DATA FOR COMPUTING BAUD ERROR PROBABILITIES). VOLTAGE COMPARITORS. LOGIC. AND COUNTERS ARE USED TO MEASURE THE RELATIVE NUMBER OF BAUDS. EXAMINED. FOR TOTAL NUMBER OF BAUDS EXAMINED. FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS. FROM (+DHALF) TO (+2*DHALF + ADAPT) AND FROM (+DHALF) TO (+2*DHALF + ADAPT) THE OFFSET THRESHOLD AMPLITUDE "ADAPT) A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE EQUAL TO THE PRESET RATIO "PER" (A SUBROUTINE INPUT VALUE). THE AMPLITUDE OF THE PSEUDO ERROR THRESHOLD."ADAPT", IS THEN USED (WITH THE AID OF TOOLS SUCH AS THIS PROGRAW) FOR SIGNAL TO NOISE RATIO TREND ANALYSIS AND PREDICTION OF BIT ERROR RATE.	REAL BITRATE :* BIT RATE :* BIT RATE :* BIT RANSMITTED : PSEUDO BIT ERRORS / BITS TRANSMITTED REAL PERINVRS :* BITS TRANSMITTED / PSEUDO ERRORS RE DIVIDED :* NUMBER THAT NET PSEUDO ERRORS ARE DIVIDED BY BEFORE THE A/D CONVERTER SETTING ADAPT. BY BEFORE PHE A/D CONVERTER SETTING ADAPT. BY BEFORE PHE A/D CONVERTER SETTING ADAPT. BY BEFORE PHE A/D CONVERTER SETTING ADAPT. INTEGER NBER :* NUMBER OF BERM VALUES = NBR ROWS PER TABLE REAL AIDRM(25) :* AMPLITUDE INTERSYMBOL INTERFERENCE TO DECISION LEVEL RATIO = EPSLN / DHALF INTEGER NAIDR :* NUMBER OF AIDRM VALUES = NUMBER OF TABLES
061-10	00000000	0000000000000000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
01				
08-10-77		22222222222	, v v v v v v v v v v v v v v v v v v v	44444444NNN
20				
SP052 02				

... PAGE 1

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LABEL .... PAGE
                                                                                                                                                                                                                                        / (BITRATE * T )
5 BITS INTO A/D ACCUMULATOR
OUTPUT FROM ZERO TO DHALF.
MSRM(NROW), SNRW(NROW).
5TM(NROW)
                                                                                                                                                                                                                                                                                                                                   FINISHED STORING A TABLE
CALL TABLE (BERM,NBER,AIDR,NSRM,SNRM,ADRM,DPERDADM,TMCNSTM,
PERINVAS,BITRATE,RDIVARD)
IF (DEBUG) WRITE (6.2)
                                                                                                                                           BEGIN A NEW R (
CALL DNROLE (BERNINROW).

CALL DNROLE (BERNINROW).

NSH (NROW) = 1, (IDNR * SDHR)

SNRW (NROW) = -20.*ALOGIO (NSRM(N)))

CALL ADROLE (AIDR.DNR.PER.ADRM(NR.)),

TMCNSTW (NROW) = - RDIVBAD * 4095 / (BITRATE * T)

TMCNSTW (NROW) = - RDIVBAD * 4095 / (BITRATE * T)

TMCNSTW (NROW) = - RDIVBAD * 4095 / (BITRATE * T)

TMCNSTW (NROW) = - RDIVBAD * 4095 / (BITRATE * T)

TMCNSTW (NROW) = - RDIVBAD * 4095 / (BITRATE * T)

TMCNSTW (NROW) = - RDIVBAD * 4095 / (BITRATE * T)

TMCNSTW (NROW) = - RDIVBAD * AND SNRW (NROW),

ADRM (NROW), SNRW (NROW),

ADRM (NROW), SNRW (NROW),

FINISHED A RO

FINISHED A RO
TRUM PROGRAM FOR ATEC BASEBAND EYE PATTERN MONITOR
                                      AIDR = AIDRM(NYABLF)
SDHR = SORT(2.* (1.* AIDR*AIDR/4.)
                                                                                                                                                                                                                                                                                                                                                                                                                          NTABLE = NTABLE + 1
IF ( NTABLE .LE. NAIDR ) GO TO 9006
                                                                                                                                                                                                                                                                                                                 NROW E NROW + 1
IF ( NROW -LE. NBER ) GO TO 9008
ENDO
                                                                                                       DOWHILE ( NROW .LE. NBER ;
GO TO 9007
CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENDO
PRINT."NORMAL END"
                                                                                 NROW = 1
                           CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STOP
                                                                                                                                                                                                                                                                                                                                   4004
                                                                                                                                                                                                                                                                                                                                                                                                                                            5006
                           9006
                                                                                                                                   9006
  01-10
                          08-10-77
 SP052 02
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LINES/		84283		113343	47666	19281	
ELAPSED 114E (SEC)	90.	•10	000	.00	.17	.43	
	OVERHEAD	PHASE 1	PHASE 2	PHASE 4	PHASE 5	TOTAL	

THERE WERE NO DIAGNOSTICS IN ABOVE COMPILATION 26K WORDS WERE USED FOR THIS COMPILATION

SUBROUTINE ADROLE (AIDR.DNR.PER.ADR.DPERDADR)

ASSUMES ADR FOR NINE-LEVEL EYE) MOD 20/SEPT/76 W F ACKER
ASSUMES A PARTIAL RESPONSE EYE PATTERN WHICH WOULD NOMINALLY HAVE
3 LEVELS BUT BECAUSE OF IMPROPER INTERSYMBOL, INTERFERENCE BETWEEN
ADJACENT BAUDS EACH NOWINAL LEVEL HAS AN EXTRA LEVEL A DISTANCE
EPSILON ABOVE NOMINAL AND ANOTHER OFFSET BY EPSILON BELOM NOMINAL
MAKING 9 TOTAL LEVELS.
DEFINE "NOMINAL TO BE HALF THE NOMINAL DISTANCE BETWEEN LEVELS
DEFINE "NOTSE" TO BE THE RMS AMPLITUDE OF THE GAUSIAN NOTSE
DEFINE "ADAPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE
THE NINE DATA LEVELS ARE THEN

(*ZEMD * EPSILN), (*ZEMD * EPSILN)

(*ZEMD * EPSILN), (*ZEMD * EPSILN)

(*ZEMD * EPSILN), (*ZEMD * EPSILN)

THE ABOVE NINE—LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION OF GAUSSIAN NOISE.

(2) AS TO PROVIDED DATA FOR COMPUTING BAUD ERROR PROBBBLITIES).

VOLTAGE COMPARITORS, LOGIC, AND COUNTERS ARE USED TO MEASURE THE RELATIVE NUMBER OF BAUDS DETECTED WITHIN "PSEUDO ERROR" DETECTION AMPLITUDE RANGES PER TOTAL NUMBER OF BAUDS WITH AMPLITUDES IN EITHER OF THE FOLLOWING RANGES WILL BE COUNTED SAY PSEUDO ERRORS, FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS, FROM (*DHALF) TO (*2*DHALF * ADAPT)

THE OFFSET THRESHOLD AMPLITUDE "ADAPT" IS CONTINUALLY ADJUSTED BY A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE COULL TO THE PRESET RATIO "PER" (A SUBROUTINE INDUT VALUE).

THE AMPLITUDE OF THE PSEUDO ERROR THRESHOLD" "ADAPT", IS THEN USED (WITH THE AID OF TOOLS SUCH AS THIS PROGRAM) FOR TREND ANALYSIS AND PREDICTION OF BAUD ERROR RATE ("BER" IN SUBROUTINE DNR9LE)

INPUT VARIABLES

** AMPLITUDE INTERSYMBOL INTERFERENCE TO DATA INDEA TO NOISE SALIO ** (DHALF) / NOISE RATIO. EPSLN / DHALF ** VALUE OF PRESET PSEUDO ERROR RATE AIDE REAL U

OUTPUT VARIABLES ! UUU

14 ADAPTIVE THRESHOLD TO "D" RATIO" ADAPT/DHALF 14 DERIVATIVE OF "PER" WITH RESPECT TO "ADR" DPERDADR

INTERNAL VARIABLES : :

1* FOR DIAGNOSTIC PRINTDUT SET DEBUG = TRUE 1* COUNTS NEWTON-RAPHSON ITERATIONS 1* NEWEST GUESS FOR VALUE OF ("ADAPT","NOISE) DEBUG/F/ NRAPHSON LOGICAL INTEGER

B-13

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TO ATTAIN THE SPECIFIED ERROR RATE

1* PREVIOUS GUESS FOR "ANR", THAT IS OLD "A",

1* INFEGER MULTIPLES OF "ONR"

1* FEDLUM "MOISE RAID, THAT IS, (AIDR & DNR),

1* FEDLUM ERROR COMPUTED USING NEWEST GUESS "A",

1* NATURAL LOG OF "PER" WITH RESPECT TO "ANR",

1* NATURAL LOG OF "PER" (THE TARGET VALUE)

1* NATURAL LOG OF "PER" (COMPUTED USING "A")

1* ASSOLUTE VALUE OF FRRUMPER

1* ASSOLUTE VALUE ERRNEW

1* PREVIOUS VALUE ERRNEW

1* TEMPORARY STORAGE FOR SCRATCH PAD NUMBERS

1* TEMPORARY STORAGE FOR SCRATCH PAD NUMBERS

1* DERIVATIVE OF "LNPERNEW" WITH RSPT TO "ANR"
                                                                                                                                                                                                                                                                                                                                                                                         A = E + ZNORMO( 4, # PER) ;* A=INVERSE OF 2*FIRST TERM PERNEW D1 = 1, # DNR DNR )
D2 = 2, # DNR D3 = 3, # DNR D4 = 4, # DNR D5 = 4, # DNR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DFNORM( +A=E) + 2**DFNORM( +A) + DFNORM( +A+E) + 2**DFNORM(C-A) + DFNORM(C-A) + C**DFNORM(D2-A) + DFNORM(D2-A) + DFNORM(D2-A) + DFNORM(D4-A) + DFNORM(D4-A) + DFNORM(C-A) 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADJUST THE ANR VALUE BY NEWTON-RAPMSON
ITERATION USING ALGG(PERNEW-PER) RATHER THAN
IERNEW-PER) FOR THE ERROR TERM TO REDUCE
SCALING PROBLEMS AND IMPROVE CONVERGENCE.
                                                                                                                                                                                                                                                                                                                  IF (.NOT. ( ERRNEW .LT. 1000. )) GOTO 9003
CORRECTION ONLY THE FIRST PASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOTICE (-0.5%LNTARGET) IS POSITIVE.
IF (.NOT. ( ERRLNPER .LE. .0.5%LNTARGET ))GOTO 9004
USE FULL.SIZED CORRECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A = A - ERRLNPER / DLNPERDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NRAPHSON = 0
ERRUE = 1200.
ERRNEW = 1100.
DOWHILE! ERRNEW .LT. ERROLD )
GO TO 9001
CONTINUE
                                                                                              PERNEW
OPERDANR
LNTARGET
LNPERNEW
ERRNEW
THING
DLNPERDA
                               ANROLD
01.02.03.04
                               2006
    U
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01.190

SP052 02 08-10-77

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1 + ONORM( +A=E) + 2, # ONORM( A) + ONORM( D) + ONORM(D] -E) - 2, # ONORM(D] +E) - 2, # ONORM(D] -A + ONORM(D] -
                                                                                                                                                                                                                                                                                                                                                         NEWTON RAPHSON CORRECTION. IF ANY. COMPLETED NOW EVALUATE THE RESIDUAL ERROR
                                         USE LIMITED CORRECTION TO
REDUCE OVERHOOT TENDENCY
A = A - LNPERNEW / DLNPERDA
CONTINUE
ENDIF
NRAPHSON = NRAPHSON + 1
CONTINUE
ENDIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADR = ANROLD / DNR
DPERDADR = DPERDANR * DNR
RETURN
END
GD TO 9005
ELSE
CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1006
C
                                                                                                                                                                                                              5006
                                                                                                                                                                                                                                                                                                    8006
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2/H	
*SR	
02-19-75	
DATE	
EDIT	

LINES/	MINUTE		83755		107992	45940	19188
ELAPSED	TIME (SEC)	10.	60.	00.	.00	.10	14.
		OVERHEAD	PHASE 1	PHASE 2	PHASE 4	PHASE 5	TOTAL

THERE WERE NO DIAGNOSTICS IN AROVE COMPILATION 26K WORDS WERE USED FOR THIS COMPILATION

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* TRUE GIVES DIAGNOSTIC PRINTOUT
COUNTS NEWTON-RAPHSON ITERATIONS
* NEWEST APPROX TO DNR VALUE FOR SPECIFIED BER
* PREVIOUS VALUE OF DNRNEW
* (BIT ERROR RATE COMPUTED FOR DNRNEW
* RERNEW - BER) * 1.E.10 TO AVOID UNDERFLOW
* ABSOLUTE VALUE OF ERRNEW
* DERIVOUS VALUE OF ERRNEW
* DERIVATIVE OF BERNEW WAT DNRNEW
                                                                                                                                                                                                                                                                                          IMPROVE FIRST APPROXIMATION OF DNR BY NEWTON-RADHSON TERATION = 10.E+10 to avoin underflow to 2.F+10
SUBROUTINE DNR9LE(BER.aIDR.DNR) ; # MOD-10/SEPT/76 W F ACKER (DATA-NOISE RATIO FOR MINE-LEVEL FYE )
DETERMINES DATA-NOISE RATIO (DNR) REQUIRED TO PRODUCE SPECIFIED BIT FRROR RATE (BER) FOR THREE LEVEL PARTIAL RESPONSE EYE PATTERN WITH INTERSYMBOL INTERFERENCE (OF AMPLITUDE AIDR) DISTORTING THE THREE-LEVEL EYE INTO A NINE-LEVEL EYE
                                                                                                                                                                                                                                                                    (BAUDS IN ERROR) / (BAUDS TRANSMITTED)
(AMPLITUDE OF INTERSYMBOL INTERFERENCE) / D
WHERE 2D = NOMINAL DISTANCE BETWEEN LEVELS
                                                                                                                                                 D / RMS NOTSE AMPLITUDE. D DEFINED ABOVE
                                                                                                                                                                                                                                                                                                                                                                                                         NEFDS D JORM, ONORM, AND ZNORMO (IN "NORMAL" FILE)
                                                                                                                                                                                                                                                                                                                                                                                           T. ( NRAPHSON .GT.0 11G0T0 9003
                                                                                                                                                                                                                                                                                              DNRNEW & ZNORMO(BER/1.5) / (1. - AIDR)
                                                                                                                                                                                                                                                                                                                                                                    DOWHILE ( EPRNEW .LT. FRROLD )
GO TO 9001
CONT: UE
IF(.) To( NRAPHSON .GT.0 );GI
                                                                                                                                                                                  DEBUG/F/:*
NRAPHSON:*
DNROLD :*
SERNEW :*
ERRBER :*
                                                                                                                                                  :
                                                                                                    ::
                                                                                                                                                                 INTERNA VARIABLES
                                                                                  INPUT V STABLES --
                                                                                                                                                                                                                                                  ERROLD
DRVBER
                                                                                                   BER
                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                 DNR
                                                                                                                                                                                 LOGICA
INTEGER
PEAL
REAL
REAL
REAL
REAL
REAL
REAL
                                                                                                                                                                                                                                                                                                                                                    MRAPHS
                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                              DUTPUT
                                                                                                                                                                                                                                                                                                                                  ERROLD
                                                                                                                                                 REAL
                                                                                                             REAL
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                                                                                                                                :
                                                                                                                                                                                                                                                                                                                                                                                                                                                               6006
                                                                                                                                                                                                                                                                                                                                                                                        9002
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          00000000000
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| PERNEW = (
| + 6. * ONORM( DNRNEW * (1.-AIDR) ) |
| - 6. * ONORM( DNRNEW * (1.-AIDR) ) | 16.
| - 12. * ONORM( DNRNEW * (1.-AIDR) ) | 16.
| - 12. * ONORM( DNRNEW * (1.-AIDR) ) | 16.
| - 12. * ONORM( DNRNEW * (1.-AIDR) ) | 16.
| FRRBER = BERNEW * (1.-AIDR) | 16.
| FRRBER = BERNEW * (1.-AIDR) | 16.
| FRRBER = BRRNEW * (1.-AIDR) | 16.
| FRRNEW = ABS(ERRER) | 16.
| CONTINUE | ENDIE | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
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| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
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| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERROLD | 60 TO 9002 | 16.
| FRRNEW * LT. ERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0001
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SP052 02 08-10-77 01-191

EDIT DATE 02-19-75 #SR 2/H

ELAPSED LINES/ TIME (SEC) WINUTE

OVERHEAD .07 68749
DHASE 1 .06 68749
DHASE 2 .05 80193
DHASE 5 .08 47063
TOTAL .27 15075

THERE WERE NO DIAGNOSTICS IN ABOVE COMPILATION 26% WORDS WERE USED FOR THIS COMPILATION

```
( NAMES ENDING IN "H" DESIGNATE ARRAYS ;
                                                                                                                                                                                                                                                                                                                                                                                                             * ADAPTIVE THRESHOLD AMPLITUDE TO ".
                                                                                                                                                                                                                                                                                                                                                                                                                             - DERIVATIVE OF PSEUDO ERROR RATE ".
                                                                                                                                                                                                                                                                                                                                                       FORMAT (24%.BASEBAND EYE PATTERN MONITOR TABLES")
FORMAT (1140.28%.TABLE FOR AIDR EDUALS ".F9.4 )
FORMAT (1140.28%.TABLE FOR AIDR EDUALS 1.0 /".F9.0)
FORMAT (1140.88%.BIF EROOF.68%.N / S..TX."SNR".7%."A / D".6X%.
"DERIV PER.TX."TIME")
FORMAT (114.11%.RATE".8%."RATIO".6%%.
"WAT A / D".8%."CONSTANT")
FORMAT (5%.EIZ.3.FI3.6.F9.2.3FI3.6)
SUBROUTINE TABLE (BERM, NBER, AIDR, NSRM, SNRM, ADRM, DPERDADM, TMCNSTM, PERINVRS, BITRATE, RDIVBAD )
                                                                                                                                                                                                   NUMBER OF LAST ROW ON PAGE
19DEZ REGISTER FOR NUMBER OF ROWS
LINE COUNTER
LINE COUNTER FOR LINE SPACER
                                  MARCH 1977
0CT 1976
                                  ALTERED BY W. F. ACKER
WRITTEN AY: 9. A. MEREDITH
                                                                                                                                                                                                                                                                                                                                           FORMAT (1H )
FORMAT (8X."NOMENCLATURE:")
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                                                          EXTERNAL VARIABLES
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8-21

04-10-77 Spues 05

01.191

161.10

SP052 02 08-10-77

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105 9008 CONTINUE
106 WRITE (6.11)
107 OC ENDO
110 C ENDO
111 WRITE (6.12)
112 WRITE (6.13)
113 WRITE (6.14)
114 WRITE (6.14)
115 WRITE (6.14)
116 WRITE (6.14)
117 WRITE (6.14)
118 WRITE (6.15)
119 9001 IF(NROW LT. NBER) GO TO 9002
120 C ENDO
121 RETURN
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5/H
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*SR
02-19-75
DATE
EDIT

		ELAPSED TIME (SEC)	LINES/ MINUTE
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.15 39	2	00.	
.15	4	90.	109637
•30	5	.15	47985
	Y	•39	18410

THEPE WERE NO DIAGNOSTICS IN ARDVE COMPILATION 26K WORDS WERE USED FOR THIS COMPILATION

TOTAL TIME

SP052 03	74-01-80		1.192									PAGE	
ORIGIN	DATE	MODULE	ENTRY	DATE MODULE ENTRY LOCATION	ENTRY	ENTRY LOCATION	FNTRY	ENTRY LOCATION	ENTRY L	ENTRY LOCATION	ENTRY L	ENTRY LOCATION	
				SUBPROGRAI	MS INCLUD	SUBPROGRAMS INCLUDED IN DECK							
023434 022020 021510 021124 020536 020536 020332 020072	023434 08/10/77 022020 08/10/77 DR9L 021510 08/10/77 ABLE 020536 09/14/76 DFNO 020532 09/14/76 QNOR 020072 09/14/76 ZNOR			023434 023450 022450 022020 021744 021124 021124 0205050 020506 020506 020506 020506 020506 020506 020506 020506	FORTRAN MS CBTAIN	0PTION FORTRAN 023434 027450 021744 021124 021124 020550 020578 020578 020578 020578 020578 020578 02010 020072 020110 020072 020117446 017324	STEM LIB	> \ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \					
017236 017100 016770 016442	01/10/73 01/10/73 01/10/73	73 FALG 73 FALG 73 FEXP			SORT ALOGT EXP FWRD.	017236 017102 016770 016613	ALOGIO.		ALOG .FENC.	017106	.FDEC.	016616	
			TERMENT OF STREET OF STREE	016645 016645 016645 016664 016512 016512 016535 016564	TECONO TO THE TE	001664 001664 001664 001664 001664 001664 001664 001664 001664 001664 001664 001664 001664 001664 001664 001664 001664 001664	POCON	016521 016504 016661 016560 016516 016560 016560	FFIL PICINT FILL A24 CA33	016622 016514 016512 016512 016456 016544 016442 016442	0.000000000000000000000000000000000000	016623 016611 016507 016508 016508 016520 016663 016663 016563	
012756	012756 75,02714 FDIO	9			FERST PRETING		TECHNOLING THE PROPERTY OF THE		0.000000000000000000000000000000000000	015750 015712 013557 013751 013056 013074 013074 013074 013074	PDC 101 101 FFRVR FFFLG FFFLG CCMMAA FCCCM	016001 015365 013566 013011 016027 016027 013156 013157 013150	

SE 2	ATION	012510 012224 012254 012255	011610 011514 011645 011504 010203	007613	005674	4511	770600	۲013
PAGE	ENTRY LOCATION	7 4 6 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	~ ~ m m	FMDB, 007613	. GPUT 00	.GR178 00451:	.GR985 003	, GUSWH 002103
	ENTRY LOCATION	012360 R 012222 012270	011550 011040 12 011502 010750	FPARAM 007576 FRENT 007371 GET 006440	R 006430 005671 IT 005674	N 005065	GR390 003507 GR984 003045 ORRPT 003362	U 002197
	ENTRY	- XXER LAXERR FRG FX4	S. REG. 1585. FYSWS.	FRENT GET	GPUTR PUTBK GAPUT	. GX186	. GR390	GRPRV
	ENTRY LOCATION	012231 012333 012343 012466	011666 011637 011674 011676 010750	007612	0056430 005671 005671	005072 005064 004504	GR99X 003000 SCRPT 003102	002105 002107 SIZE
	ENTRY L	BUGG FYIO	ANYERR FXCODE FXSW1	PCOV LINSZ GFLG WTREC	GGETR GPTBK GAPTB	OPEN . GXLAB		GRCVY
	ENTRY LOCATION	013614 012220 012334 012254 012464	012350 011517 011625 012144 011137 011676 010202	007623 007621 007574 007367 007336 007172	006442 006430 005666 005666	005042 005064 004374 004374	003412 003370 003077 003075	GLREA DO2200
	ENTRY L	FCNVC 013614 FXEM. 012220 KIND 012334 CLLR 012464	FXALT FXALT FXALT FXALT FREST	SETU. ASCB. NHANO SETIN SETUN GETBK	. 6CL SR COPY 6ACOP	GAOPE GACLS GACLS	GR375 GARTB GR979 ASCII	GLREA.
	DATE MODULE ENTRY LOCATION				006440 006430 005666 005674			. GOVRL 002107
1.192	ENTRY	FCAVL FEDF. FXEM LSTMS FX2			GOPNP GCOPY PUT			
	HODOLE	FEOF	FXER FOPE	FORT FARM SECTION OF S	GPTB	600E 600E 600E 600E		GINI
77-01-80	DATE	74/01/11	011030 75/02/14 FXER 010750 73/05/24 FXIT 010160 74/11/06 FOPE	07/04/65 73/09/05 73/09/03 03/05/73 74/10/24 01/03/66 07/07/69	07/07/69		75/02/03 74/12/03 75/02/05 75/02/05	002100 03/07/66 GINI
50 250dS	08161N	012702 012536 012210	011030	007722 007574 007374 007366 007336 007336	006430	005072 005064 004374 004210 004122	003574	002100

SP052 03 08-10-77 1-192

ENTRY LOCATION DATE MODULE ENTRY LOCATION ENTRY LOCATION ENTRY LOCATION ENTRY LOCATION ORIGIN

PAGE

FCB AND BUFFER SPACE
AVAILABLE
000101 THRU 002077
FILF CTRL BLKS 001750 THRU 002100
MAXIMUM AUFFER SPACE RFOULRED

000131

740808 2/H

10K. IS THE WINIMUM MEMORY NEEDED TO LOAD THIS ACTIVITY WITH ALL FILES OPEN 001164 LOCATIONS REQUIRED FOR LOAD TABLE EXECUTION PROGRAM ENTERED AT 023434. THROUGH "FSETU

13-26

| No. 10 | N

RECORD COUNT = 001282

14

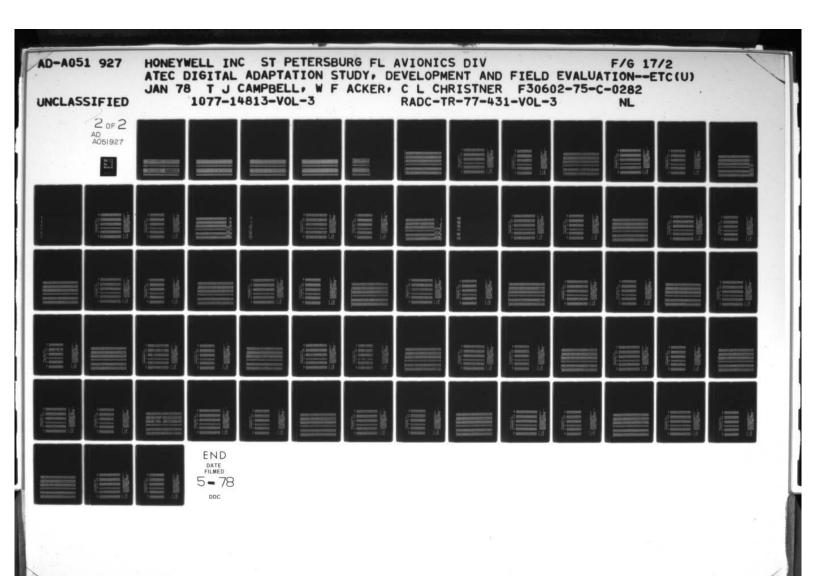
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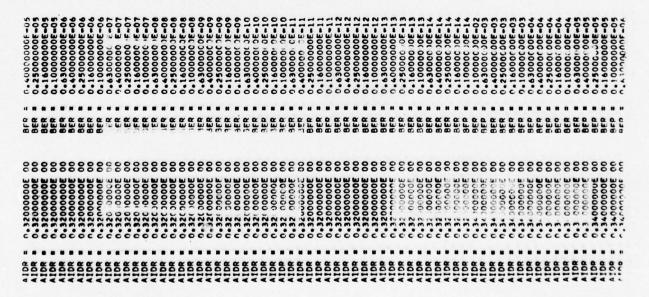
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100

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| AIDR | C.22000000E 00 BER | D.1000000E-14
| AIDR | D.22000000E 00 BER | D.1000000E-02
| AIDR | D.22000000E 0

| March | Marc





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ES
TABLES
10P
HON
PATTERN
PA
FYE
AND
BASEBAND
8

	PSEUDO E	TABLE FOR AIDR EQUALS PSEUDO ERROR RATE EQUALS	EQUALS 1.0 /	2800.	
AIT FRROR	S / Z	SAR	0 / V	DERIV PER	TIME
RATE	RATTO	1N 08	RATTO	WRT A / D	CONSTANT
0 1008-02	7.04	~	0.94448		12474
0 430E-03	1		0.050513	c	18142
0.400F-03	0.204164	13.80	0.928164	-0.005345	0.244123
0.250E-03	108		0.899333	0	28916
0.1605-03	1600	4	0.870198	0	30026
0.100E-03	1509	4	0.841009	0	29293
0.630E-04	1980	•	0.814950	-0.004644	28096
0.400E-04	1500	-	0.791819	-0.004837	26976
0.250E-04	1041	-	0.770109	-0.005022	25985
0.160E-04	5636	-	0.751241	-0.005181	25187
0.100E.04	5238	-	0.732912	-0.005334	24464
0.630E-05	5873	-	0.716209	-0.005474	,23839
0-400E-05	5536	•	0.700886	-0.005603	23288
0.250E-05	5209	•	0.686040	-0.005731	,22768
0.160E.05	916	•	0.677785	-0.005848	,22313
0-100F-05	.625	•	0.659621	-0.005968	21866
0.630E-06	1355	•	0.647400	-0.006082	,21454
90-3004-0	102	~	0.636014	-0.006192	21073
0.250E-06	8855	~	0.624936	*0°900°0*	20701
0.160F-06	3631	~	0.614740	0.006408	,20365
0.100E.06	3406	~	0.604611	-0.006515	20028
0.630E-07	3196	~	0.595118	-0.006619	19713
0.400E-07	8662	~	0.586200	-0.006720	19417
0.250F-07	2803	~	0.577375	-0.006823	19125
0.160E.07	2625	~	0.569348	-0.006919	18859
0.100F-07	2445	8	0.561240	-0.007019	18590
0.630E-08	2275	8	0.553592	-0.007116	18337
0-400E-08	2115	8	0.546365	-0.007210	18097
0.250E-08	1955	8	0.539172	-0.007307	17859
0.160E-08	1810	8	0.532595	-0.007397	17641
0.100E.08	1662		0.525918	0	17420
0.630E-09	1521	æ	0.519590	-0.007582	17210
0-400E-09	1388	8	0.513582		17011
0.250F-09	0,112553	8	0.507577	-0.007761	16813
0.160F-09	1133	O	0.502063		16630
0-100E-09	1008	0	0.496443	.0079	16444

* HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	AMPLITUDE OF INTERSYMMENT OF THE STATE OF TH	* ADAPTIVE THFESHOLD AMPLITUDE TO D RATIO. * DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO. ** DUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD ** CODE FOR SMALL CHANGES AROUND STEADY STATE VALUES	DIVIDER RATIO INTO D/A CONVERTER # 4.
NOMENCLATURE:	A 1DR N / S RATIO SIIR	A / D RATIO	

TABLES
MONITOR
PATTERN
FYE
BASEBAND

RATE RATE 0.640E-10 0.250E-10 0.150E-10 0.150E-10 0.100E-10 0.400E-11						
	SIN	SAR	A / D	DERIV PER	TIME	
	CILLAN	90 N	KATIO	WKT A / O	CONSTANT	
	108899	19.76	0.491096	-0-008022	0,162670	
	0.107769	19.35	0.486002	-0.008106	0.160983	
	106636	19.44	0.480892	-0.008192	0.159290	
	0.105592	19.53	0.476185	-0.008273	0.157731	
	104525	19.62	0.471371	-0.008357	0.156137	
	0,103506	19.70	0.466777	-0.008440	0.154615	
	102533	19.78	0.462388	-0.008520	0,153161	
	0,101553	19.87	0.457972	-0.008602	0.151698	
	100649	19.94	0.453893	-0.008679	0.150347	
	0.099722	20.02	0.449711	-0.008760	0.148962	
	.098834	20.10	0.445710	-0.008839	0.147637	
	.097984	20.18	0.441877	-0.008915	0.146367	
	121760.	20.25	0.438012	*0.008994	0.145087	
0.160E-12 0.	.096334	20.32	0.434434	890600.0-	0,143902	
	.095519	20.40	0.430757	-0.009145	0.142684	
	.094737	20.47	0.427232	-0.009221	0.141516	
	.093987	20.54	0.423848	-0.009295	0.140395	
	.093228	20.61	0.420429	-0.009370	0.139263	
	.092525	20.67	0.417257	-0.009441	0.138212	
	.09160	20.74	0.413992	-0.009516	0.137131	
	.091106	20.81	0.410856	-0.009588	0.136092	
,	.090437	20.87	0.407840	-0.009659	0.135093	
.250E-14	089760	20.94	0.404788	-0.009732	0.134082	
•	0,089131	21.00	0.401951	-0.009801	0.133142	
.100E-14	.088483	21.06	0.399027	-0.009873	0.132173	

NOMENCLATURE:

* HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THRE LEVEL EYE I.E., DECISION LEVEL.

* AMPLITUDE OF INTERSYMBOL INTERFRENCE TO D RATIO.

* AND ST ON RMS SIGNAL RATIO.

* ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.

* DERINATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.

* DOUSILINEAR THE CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE.

* 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = AIDR N / S RATIO S N R A D RATIO DERIV PER WRT TIME CONSTANT

	.12474	16142	21992	616870	20000	28096	26976	.25985	.25187	.24403	.23839	90767	0.227683	21866	21454	.21073	.20700	.20365	\$2002	10417	10128	18859	.18590	.18337	18091	.17859	.17641	17420	117/11	14813	16630	16444	.16267	.16098	.15929	.15773	.15614	16217	15170	.15035	.14897	.14764	14638	14391	14269	.14153	14041	.13928	.13823	.13715	113611	13511	13410	13316	.13219
65	-0.01046	0.00719	\$60000	10000	*****	0.00464	0.00483	0.00502	0.00518	0.00533	7450000	0.00000	0.005731	0.00596	0.00608	0.00619	0.00630	0.00640	0.00651	00061	00000	0.00691	0.00701	0.00711	0.00721	0.00730	0.00739	0.00749	8670000	101000	0.00.0	0.00793	0.00802	0.00810	0.00819	0.00827	0.00835	5 0 0 0 0	0.00860	0.00867	0.00875	0.00883	1680000	00000	0.00914	0.00922	0.00929	0.00938	9460000	15600 0	0.00958	960000	0.00973	0.00979	0.00987
LE MAS CA	97996"0	.95051	92816	664489	10140	81495	79182	. 77011	.75124	73291	11621	46001	0.686046	65962	0,24,90	.33602	.62484	.61475	.60462	61666.	87730	56936	56126	.55361	.54638	.53519	.53262	.52594	70614	19203	50210	49648	49114	.48604	*6087	.47623	741/4	77697	45803	.45396	84649	.44578	C6144.	43451	43084	.42732	.42394	.42053	.41736	.41410	.41096	.40795	165040	40207	. 39915
YOUE. TAB	13.15	4			:		5.1	5.3	2.0	6	•		16.38	1.9	6.9	1.0	7.	2.3	*	c.	. "	8	8.1	8.2	8.3	4.4	9.5	6	0 0	00		2.6	6.3	6.9	4.6	6.5	10		0	6.6	0.0	1.0	7.0		4.0	0.5	0.5	9.0	1.0	1.0	8.0	6.0	6.0	0-	:
BUG PPTHTOUT	.22013	.21150	20390	19961	18481	17951	1747:	11011.	14605	16206	15841	10001	0.151760	14590	14319	.14067	.13818	.13594	13369	12040	12763	12585	12405	.12234	12074	11011	11767	11619	9,411.	11211	11088	10963	10844	16731	10617	10512	00001	10205	10107	10016	.09923	.09834	00442	.09583	.09501	.09422	.09347	.09271	00260	.09127	85060	06680	22680	08859	\$6180.
IN OF	. 10rE-0	. 430E-C	0 30 30	0-3067	1005	A 30F	400E-0	-250E-0	-160E-0	.100E-0	630E-0		0-250E-05	100E-0	.630E-0	0-3004.	.250E-0	.160E-0	.100E-0	400E	250F.	1605.0	100E 0	630E-0	400E-0	.250E-0	160E-0	1005-0	.630E-0	2505-0	IANE	100E-0	.630E-1	.400E-1	.250E-1	.160E-1	1.3001.	**************************************	250E-1	.160E-1	.100E-1	.630E-1	250F-1	140E-1	100E-1	.630E-1	1-3004.	.250E-1	.160E-1	.100E-1	.630E-1	.400E-1	-250c-1	1006-1	-100E-1

	PSEUDO E	PSEUDO ERROR RATE EQUALS	-	2800.	
AIT FRROR	RATIO	SAR IN DB	RATIO	DERIV PER	TIME
3		:		3	
70-100	0.220134	13.15	. 10000	2010	14/47100
630E-03	0,211509	13.49	.95051	0719	0.181423
400E-03	0.203909	13.81	.92816	30534	0.244122
.250F-03	0.196817	14.12	. 8993	-0.004513	0.289159
60E-03	0-190701	14.39	87019	10434	0.300258
00E-03	0.184817	14.67	84101	30445	0.292937
30F-04	0-179514	14.92		-0-004644	0.280960
00E-04	0.174710	15.15	0.701821	0.004837	0.249766
2505-04	0110110	16.30	770111	0.004022	0.250652
100	2000		711111		36.00
*0-200	200010	2000	47161	000000	0.651875
00e=04	0.162068	15.81	0.732916	-0.005334	0.244638
30E-05	0.158410	16.00	0.716213	-0.005474	0.238392
\$0-300+°C	0.155038	16.19	0.700892	-0.005603	0.232880
50E-05	0.151760	16.38	0.686046	-0.005731	0.227683
160E-05	0.148827	16.55	0.672792	-0.005848	0.223128
00E-05	0.145909	16.72	0.659629	-0.005968	0.218661
630F-06	0.143198	16.88	0.647408	-0.006082	0.214548
400E-06	0.140670	17.04	0.636024	-0.006192	0.210737
50E-06	0.138187	17.19	0.624847	*0.006304	0.207009
60E-06	0,135944	17,33	0.614752	-0.006408	0.203650
100E-06	0.133693	17.48	0.604625	-0-006515	0.200286
30E-07	0,131583	17.62	0.595133	-0.006619	0.197136
00E-07	0.129600	17.75	0.586216	-0-006720	0.194178
250E-07	0,127638	17.88	0.577393	-0.006823	0.191253
160E-07	0.125853	18.00	0.569367	-0-006919	0.188593
00E-07	0.124050	16.13	0.561261	0.007019	0.185907
630E-08	0.122349	18.25	0.553415	-0-007116	0.18373
400E-08	0.120742	18.36	0.546389	-0.007210	0.180979
250F-08	0.119142	18.48	0.530100	10.007304	0.178507
60F-08	0-117679	18.49	0.532626	-0.007397	0-176418
00F-08	0-116194	18.70	0.525040	10.00.0	0.174207
10F-00	0.114786		0.510422	0.007482	1122111
400F-00	0-113440	00.4	0.513417	0.007470	0.170122
200	113113				7710110
1405-00	0 110004		20000	19100	661991
100	00001100		1	90000	000000
000	CE 400 0	10.20	17700	-U-UU-U-U-U-U-U-U-U-U-U-U-U-U-U-U-U-U-	77777

LF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE HF THREE I EVEL EYE I.E., DECISION I EVEL	* AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. * RMS NOISE TO RMS SIGNAL RATIO. * SIGNAL POWER TO NOISE POWER TO NOISE POWER TO NOISE POWER TO STATIO. * ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO. * DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO. * DUASILINARA TIME CONSTANT OF THE ADAPTIVE THRESHOLD **LOOP FOR SMALL CHANGES AROUND STRANG YEARE VALUES	HEN BITE RATE = 12552600, AND ERROR SIGNAL SIVIDER RATIO INTO D/A CONVERTER = 4.
IA I	SHS	DIA V
NOMENCLATURE: D	AIDR N / S RATIO SNR A / V RATIO DERIV DER WRT TIME CONSTANT	

TABLES
MONITOR
PATTERN
EYE
BASEBAND

TABLE FOR AIDR EQUALS

	S / Z	SMR	0 / W	CERIV PER	TIME
3 4 5	PATTO	1N 08	RATIO	WRT A / D	CONSTANT
0.630F-10	0.108445	19,30	0,491141	-0.008022	0.162675
0.400E-10	0.107312	19.39	0.486049	-0.008106	0.160989
0.250E-10	0.106174	19.48	0.480942	-0.008192	0.159297
0.160E-10	0,105126	19.57	0.476237	-0.008273	0.157738
0.100E-10	0.104055	19.65	0.471427	-0.008357	0.156144
0.630E-11	0.103032	19.74	0.466836	-0.008439	0.154623
0.400E-11	0,102055	19.82	0.462449	-0.008519	0.153170
0.250E-11	0.101072	16.61	0.458037	-0.008601	0.151708
0.160E-11	0.100164	19.99	0.453961	-0.008679	0.150357
0.100E-11	0.099233	20.07	0.449782	-0.008759	0.148973
0.630E-12	0.098342	20,15	0.445784	-0.00883R	0.147648
0.400E-12	0.097488	20.22	0.441955	-0.008915	0.146380
0.250E-12	0.096628	20.30	0.438094	-0.008993	0.145100
0.160E-12	0.095831	20.37	0.434519	190600-0-	0.143916
0.100E-12	0.095012	20.44	0.430847	-0.009144	0,142699
0.630E-13	0.094227	20.52	0.427325	-0.009220	0,141532
0.400E-13	0.093474	20.59	0.423945	-0.009293	0.140412
0.250E-13	0.092712	20.66	0.420530	-0.009369	0,139281
0.160E-13	0.092006	20.72	0.417362	099600	0.138231
0.100E-13	0.091279	20.79	0.414102	-0.009514	0,137151
0.630E-14	0,090580	20.86	0.410969	-0.009587	0.136113
0.400E-14	0,089908	20.92	0.407958	959600-0-	0,135115
0.250F-14	0,089228	50.99	0.404910	-0.009731	0.134105
0.160E-14	0.088596	21.05	0.402078	-0.009799	0,133166
0.100E-14	0,087945	21.12	0,399158	-0.009871	0,132199

HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE
THE THREE LEVEL EYE I.E., DECISION LEVEL.

AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

ALS NOISE TO REAS SIGNAL RATIO.

ALS NOISE TO REAS TO NOISE POWER IN DECIBLES.

ADAPTIVE THRESHOLD AMPLITUDE TO N RATIO.

DASTLINEAR THE CONSTANT OF THE ADAPTIVE THRESHOLD

LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES

BITE MALL CHANGES AROUND STEADY STATE VALUES

BITE RATIO INTO D/A CONVERTER ### 44. ATCR N / S RATIO SNR A / D RATIO DERIV PER WRT TIME CONSTANT NOMENCLATURE:

	12473	18141	24410	20023	30063	28093	26974	25982	25185	24461	23836	.23285	.22765	.22310	.21863	.21452	.21071	, 20699	20363	20021	21/610	10124	18859	18590	.18337	.18098	17860	17643	17213	.17015	.16816	.16634	16272	16104	.15936	0.157809	15470	15326	.15180	15046	80641	14650	.14523	.14406	.14285	1405	13945	13841	.13734	13631	.13532			0.134328			
	0.01046	0.00719	0.00534	0.00451	96 900 0	000	0.00483	0.00502	0.00518	0.00533	0.00547	0.00560	0.00573	0.00584	0.00596	9090000	0.00619	0.00630	0,900.0	0.00651	2990000	00000	00000	0.00701	0.00711	0.00721	0.00730	0,00739	0.00758	0.00766	0.00776	0.00784	00000	0.00610	0.00818	-0.008269	66800.0	0.00651	0.00859	0.00867	6,000	0.00890	0.00898	060000	0.00913		0.003	0.00942	0.00950	0.00957	0.00964			-0.009714			
WAS CALL	67	95051	92817	.89934	17078	81407	79185	77015	75129	73297	71627	₹2007.	.68613	.67289	.65974	.64753	.63616	• 62500	.61492	60481	* 5 6 6 C •	57744	56963	56155	.55392	.54672	53955	53300	52005	.51408	.50810	.50262	40172	48666	.48158	0.476912	44787	46322	.45884	45480	44470	44291	.43909	.43555	43192	42800	42172	41859	.41537	.41228	0.40931	204	20464	2	20464	150464	204
4	-			-	••	. 0	. ~	1			۰.	~	4.	٠.	۲.	٥.	-:		*				0	8.2	8.3	4.8	8.5	9 4	8.8	6.	3.	2.6			9.5	19.67		6	00		•			4.0					6.0	6.0	21.05	NOIL	NOT	21.12	TION	ATTON	1104
PR. P.	75617	21077	20314	19603	18300	17866	17383	16921	16514	16113	15746	15407	15077	.14782	14489	14216	13965	13712	13487	13260	12840	12451	12471	12290	.12119	11957	11796	11649	11358	111223	11089	10965	10720	10606	10401	0.103865	10175	1001	.09978	.09887		09618	.09532	.09452	06370	00215	09139	99060	\$6680	.08925	0.088580	100	A 1 100	0.087899	LO AT LOC	AT LOC	10 AT 100
	1001-0	630E-0	400E-0	0-30C2		A 30F	40	250	1160	100	630	000	.250	.160E-0	.100E-0	630	-400E-0	-250E-0	.160E-0		400E-0	250E-0	160E-0	100	0-30E9.	-400E-0	.250E-0	1005-0	.630	-400E-0	-250E-0	•160E-0	AAOF	400E-1	.250E-1	0.160E-10	AAOF	400E-1	.250E-1	.160E-1	A 30F-1	.400E-1	.250E-1	.160E-1	.100E-1	400F-1	.250E-1	.160E-1	-100E-1	.630E-1	.400E-14	XP UNDER	XP CADER	250E-14	EXP UNDER	XP UNDER	NO (INDED

28 UNSEPTE AT LUCATION 020464 04160E-14 0.087265 21.18 0403572 -0.009782 0.133398 04100E-14 0.086613 21.25 0400646 -0.009853 0.132440

B-54

	6
TABLES	0,0400
MONITOR	•
ATTER	AIDR
E VF D	F FOR
BASEBAND FYF PATTERN MONITOR TABLES	TABLE FOR ATOR EQUAL

	TIME	0.124734	0.181411	0.244105	0.289138	0.300235	0.292913	0.280936	0.269741	0.259828	0.251850	0.244613	0.238367	0.232855	0.227659	0.223105	0.218639	0.214527	0.210718	0.206992	0.203635	0,200272	0,197125	0.194170	0.191248	0.188590	0.185908	0.183378	0.180987	0.178609	0.176435	0.174228	0,172137	0.170152	0.168169	0.166348	0.164493
0.0400	DERTV PER	-0.010461				-0.004346			-0.004838		-0.005181	-0.005335	-0.005474	*0*00*0*	-0.005732	-0.005849	-0.005968	-0.006083	-0.006193	-0.006304	*0*900*0*	-0.006516	~0.006620	-0.006720	-0.006823	-0.006919	-0.007019	-0.007116	-0.007210	-0.007306	-0.007396	-0.007490	-0.007581	-0.007669	97700	-0.007844	.00793
FOUALS 1.0	RATTO	0.966670	950	928	.89	87021		.81497	79185	.77015	.75129			.70096	.68613	61289		64753	63616	.62500	.61492	.60481	•	.58644	0.577640	0.569634	0.561550	0.553926	0.546724	0.539558	0.533007	0.526358	.5200	.51408	0.508106	.50262	.49703
TABLE FOR AIDR EQUALS PSEUDO FRROR RATE FOUALS	SNR IN DB	13.17	13.52	13.84	14.15	14.43	14.70	14.96	15.20	15.43	15.64	15.86	16.06	16.25	16.43	16.60	16.78	16.94	17.10	17.26	17.40	17.55	17.69	17.82	17.96	18.08	18.21	18.33	18.45	18.56	18.67	18.79	18.89	19.00	19.10	19.20	19.30
PSEUDO F	RATIO	0.219422					٦.	7	٦.	٦.	٦.	-	٦.	-	٦.	٦.	0.144895	0.142168	0,139626	0,137129	0.134872	0,132608	0.130485	0.128490	C.126516	0.124719	0.122905	٦.	٦.	٦.	٦.	7	٦.	7	0,110893	٦.	-
	RIT FRROR	0.100F-02	0-6306-03	0.400F-03	0.250F-03	0.160F-03	0.100E-03	0.630E-04	0.400E-04	0.250E-04	0.160E-04	0.100E-04	0.630F-05	0.400E.05	0.250E-05	0.160E.05	0.100F.05	0-630E-06	0.400F-06	0.250E.06	0.160E-06	0.100E-06	0.630E.07	0.400E-07	0.250E-07	0.160F-07	0.100E-07	0-430E-08	0.400E-08	0.250E-08	0-160E-08	0-100E-08	0.630E-09	0-400E-09	0.25CE-09	0-160E-09	-

- HALF OF THE NORMAL DISTANCE SETWEEN DATA LEVELS FOR THF	### INTERSYMENT TO BE AMPLITUDE OF THE STATE OF THE STATE OF THE STAND INTERFERENCE TO DRATIO. ### RMS NOISE TO RMS SIGNAL GATIO. ### SIGNAL POWER TO NOISE DOWER IN DECIBLES. ### ADAPTIVE THRESHOLD AMPLITUDE TO RATIO. ### DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.	* QUASILINFAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE * 12552600, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER *
NOMENCLATURE:	ATDR N / S RATIO SNR A / D RATIO DERIV PER WRT	

TABLES
MONITOR
PATTERN
FYF
RASEBAND

00	2800
00000	1.0 /
R EQUALS	FOUALS
DA AID	PATE
BLE FC	O ERBOR PATE E
44	PSEUDO

CONSTANT	0.162728	0.157809 0.157809 0.156222 0.154708	0.151806 0.150463 0.149086	0.146508 0.145237 0.144060 0.142852	0.141693 0.140581 0.139459 0.138418 0.137346	0.136317 0.135328 0.134328 0.133398 0.132440
DERIV PER	-0.008019	10.008188 10.008188 10.008435	-0.008596 -0.008673 -0.008753	0.008985 0.008985 0.009058	0.009209 0.009282 0.009357 0.009427	.0.009573 .0.009643 .0.009714 .0.009782
RATTO	0.491721	0.481585 0.476912 0.472135 0.467578	0.458849	0.442913 0.439090 0.43553	0.428438 0.425097 0.421724 0.418595	0.412287 0.409317 0.403522 0.400646
1 28 NB	19.40	10.01 0.01 0.01 0.01	20.02	20.34	20.64 20.71 20.78 20.85	20.99 21.05 21.12 21.18
RATIO	0.107203	0.103865 0.102737 0.101759	0.099789	0.095323 0.095323 0.094523 0.093701	0.092913 0.092157 0.091392 0.090684 0.089954	0.089254 0.088580 0.087265 0.087265
ALT FRROP	0.630E-10	0.160E-10 0.160E-10 0.630E-11	0.250E-11 0.160E-11 0.100E-11	0.400E-12 0.250E-12 0.160E-12	0,400E-13 0,400E-13 0,250E-13 0,160E-13	0,630F-14 0,400F-14 0,250F-14 0,160E-14

NOMENCLATURE:

HALF OF THE NORMAL DISTANCE RETWEEN DATA LEVELS FOR THE THE THREE LEVEL EYE I.E., DECISION LEVELS

A DECISION LEVEL OF RANS SIGNAL RATIO.

SAR HOISE TO RANS SIGNAL RATIO.

SAR A LOUSE TO RANS SIGNAL RATIO.

SAR A LOUSE TO RANS SIGNAL RATIO.

SAR A LOUSE TO RANS SIGNAL RATIO.

A D RATIO = ADAPTIVE THRESHOLD DEPONER IN THE RESPECT TO A / D WATIO.

DERIV DEP WAT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D WATIO.

CONSTANT = DUASILINEAR TIME CONSTANT OF THE MADATIVE THRESHOLD

LOOP FOR SARIL CHANGES ARQUID STEADY STATE VALUES

WHEN BITE RATE = 12552600. AND ERROR SIGNAL

DIVIDER RATIO INTO D/A CONVERTER = 4.

	12470	24403	20004	30013	29281	.28083	.26963	25972	24450	23826	23274	.22755	22300	*5182*	21043	20400	20355	20020	.19706	19411	19119	18587	18335	.18097	17861	17644	17217	17020	.16823	16642	16458	0-161164	15949	15795	15638	15245	15201	.15068	14932	14801	14551	.14435	14316	16092	13081	13878					2	.13671	0.135743	. 134.73
£0.		00524	1900	0.00434	.00445	0.00464	0.00484	-0.005024	000000	0.00547	00500	0.00573	0.00585	16500-0	809	4100	00041	0.00651	.00662	0.00672	0.00682	0.0000	00711	0.00721	0.00730	739	0.00	0.00766	.00775	0.00784	0.00792	0.00001	0.00618	0.00826	.00834	0.00000	00858	0.00866	0.00873	1880	0.00896	0.0000	.00911	140000	0.00033	00000				2	******	0.00954	-0.009613	0.00468
MAS CA	.96667	00000	80038	87027	84110	.81507	.79198	.77031	73310	71654	70127	.68648	.67328	91099	64803	1000	61559	.60554	.59613	.58730	57857	54242	55507	.54795	.54086	.53439	52161	51571	. 50983	.50443	49893	0.488741	.48376	.47917	4744	46577	46149	.45754	.45349	64963	44220	.43876	.43522		425	42228	10	200	200	1010	20464	0.41616		20.44.
A						5.0	2.5				6.3	6.5	6.7		•••	֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓					9.0		4	6.5	9.0				.2	6.3	*	19.64	1.6	8.	•			0.2		•		9.0	-				ATTON	ATION	201	31.00	ATION O	21.16	21.22	•
RINT	2006	20189	19473	18856	.18262	.17727	.17241	16776	15063	15593	15252	.14920	.14624	976-11	13708	13647	13320	13092	.12878	.12678	.12479	12117	11945	.11782	11621	11973	111181	11046	.10912	10788	10662	:-	.10314	10209	10101	00000	.09802	.09711	.09618	82660	.09357	.09277	.09196	00042	08066	0	A7 L	LO AT LO	FLO AT LO	7.00	ATL	0.087545	08687	47 1
15 11 51	1005-	ANDE D	250F-0	160E-0	.100E-0	.630E-0	-400E-0	250E	TOUE	630E-0	-300F	.250E-0	-160E-	-100E-0	400E	2506	160E-0	.100E-0	.630E-0	-400E-0	-250E-0	100F-0	.630E-0	.400E-0	.250E-0	1005-0	A30F-0	400E-0	-250E-0	.160E-0	-100E-0	0.400E-10	.250E-1	.160E-1	.100E-1	- 4006+	.250E-1	.160E-1	-100E-1	- 900 P	.250E-1	-160E-1	-100E-1	1-300F	250F-1	.160E-1	EXP UNDER	KP UNDER	XP UNDER	EXP UNDER	P UNDER	630E-14	-400E-1	EXP (IN)

```
## JOSEMEL AT LOCATION 020464

EXP LANGFELD AT LOCATION 020646

0.100E=14 0.084927 21.42 0.404900 -0.009819 0.132898
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TABLES
MONITOR
PATTERN
FYE
ASFBAND

BIT FRROR	8/1	SNR	0 / V	DERIV PER	TIME
RATE	RATIO	1N 08	RATIO	WRT A / O	CONSTANT
1006	0,218245	13.22	96667	-0-010464	-
.630F-03	0.209554	13.57	95053	-0.007195	
400E	0.201892	13.90	0.928195	-0.005347	0.244031
.255E-	0.194739	14.21	86668	-0.004515	"
160F	0.188567	14.49	.87027	-0.004348	
٦.	0.182627	14.77	84110	-0.004457	
•	0.177273	15.03	.01507	-0.004647	"
	0.172418	15.27	.79198	-0.004840	"
	0.167769	15.51	.77031	-0.005024	
	0,163666	15.72	.75148	-0.005186	
	0.159637	15.94	7331	-0.005337	
	0.155937	16.14		-0.005477	"
	0.152526	16.33		-0.005607	.,
	0.149209	16.52		-0.005734	
	0.146240	16.70	0.673287	-0.005852	
	0.143288	16.88		-0.005971	
	0.140543	17.04		-0.006085	
	0.137985	17.20		-0.006195	
	0.135472	17,36		-0.006307	۳,
1.160F-06	0.133202	17.51		-0.006411	
	0.130924	17.66		-0.006518	
	0.128789	17.80		-0.006622	-
	0,126783	17.94		-0.006722	٦.
	0.124799	18.08		-0.006825	-
	0.122994	18.20		-0.006921	-
	0,121171	18.33		-0.007020	٦.
	0,119452	18.46		-0.007117	-
	0.117828	18.58		-0.007210	-
	0,116212	18.69		-0.007306	٦.
	0.114735	18.81		-0.007395	-
.100E-0	0,113236	18.92		-0.007489	-
-630E-0	0,111815	19.03		-0.007579	٠.
-400+	0.110467	19.14		-0.007667	-
0.250E-09	0,109121	19.24		-0.007757	-
.160F-0	0.107885	19.34		-0.007841	-
1005	104436	77 01		000000	

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. HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	* AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.	# RMS NOISE TO RMS SIGNAL RATID.	- SIGNAL POWER TO NOISE DOWER IN DECIBLES.	- ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.	* DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.	- DUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD	LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES	WHEN BITE RATE # 12552600. AND ERROR SIGNAL	DIVIDER RATIO INTO DIA CONVERTER . 4.
0	ATDR	N / S RATIO	SNR		DERIV DER WRT	TIME CONSTANT			

TABLES
MONITOR
PATTERN
FYF
BASEBAND

0	2800.
0090-0	1.00
EDUALS	O FRROR RATE FOUALS
A A TOP	SATE F
BLE FO	FRROR
4.	PSEUDO
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BIT FRROR		0110			
	84710	1 08 N	RATTO	WAT A / D	CONSTANT
0.6305-10	0.105428	19.54	0,493713	-0.008014	0.162831
9	0.194287	19.64	0.488741	-0.008097	0.161164
01	0.103144	19.73	0.483760	-0.006182	0.159493
10	0,102091	19.82	0.479176	-0.008261	0.157954
10	0.101015	19.91	0.474494	-0.008344	0.156382
11	0.099988	20.00	0.470030	-0.008425	0.154883
11	0.099008	20.09	0.465770	-0.008504	0.153451
11	0.098022	20.17	0.461490	-0.008584	0,152011
0.160F-11	0.097112	20.25	0.457540	-0.008660	0.150683
==	0.096180	20.34	0.453496	-0.008739	0,149321
12	0.095288	20.02	0.449630	-0.008816	0.148019
.400E-12	0.094435	20.50	0.445932	-0.008891	0.146773
0.2506-12	0.093574	20.58	0.442207	-0.008967	9,145517
12	0.092778	20.65	0.438762	0,00000	0.144355
12	0,091961	20.73	0.435227	-0.009115	0.143162
13	0.091177	20.80	0.431841	-0.009188	0.142019
9.400E-13	0.090426	20.87	0.428594	-0.009260	0.140922
0.250E-13	0.089667	20.95	0.425318	-0.009333	0,139815
0.160F-13	0.08963	21.02	0.422282	-0.009402	0.138788
0.100E-13	0,088240	21.09	0.419161	-0.009474	0.137732
14	0.087545	21,16	0.416165	-0.009545	0.136718
14	0.086877	21.22	0.413288	-0.009613	0,135743
0.250E-14	0.086201	21.29	0.410380	-0.009683	0.134757
0.160F-14	0.085574	21,35	0.407680	-0.00975C	0.133842
-14	0.084927	21.42	0.40400	-0.009819	0.132896

NOMENCLATURE:

HARFE LEVEL EYE I.E., DECISION LEVELS FOR THE THE THREE LEVEL EYE I.E., DECISION LEVEL.

MAPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

MAPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

MAPLITUDE THRESHOLD AMPLITUDE TO D RATIO.

DEPIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.

DASTLINEAR THE COMPARANT OF THE ADAPTIVE THRESHOLD

MAPLE CHANGES AROUND STEADY STATE VALUES

RATE RATE ### ISS22600. AND ERROR SIGNAL

RATE RATE ### CONVERTER ### AND ERROR SIGNAL ATDR 11 / S PATIO SNR A / D RATIO DFRIV PER WRT TIME CONSTANT

	10123	24.384	2000	10987	.29988	.29254	.28055	.26935	.25943	.25146	24422	.23797	.23246	22727	22273	21827	21417	21037	20666	20331	.19997	.19684	.19390	19100	18837	18571	10084	17849	17634	.17416	17209	17014	0.168187	16456	16283	16118	.15952	15800	16405	15354	115211	.15080	.14945	14816	14568	14453	14335	14222				0 141134						14003	0.139022
ED.		0000	20000	16.00.0	0.00435	0.00446	0.00465	0.00484	0.00503	.00518	0.00534	0.00548	0.00561	.00574	00000	0.00507	0.0000	00620	0.00631	0.00641	0.00652	0.00662	.00672	0.00683	0.00692	20100	00721	00731	00740	.00749	.00758	00767	7000	00,00	00001	00000	.00818	858	000000	0.00849	0.00857	0.00865	0.00873	08800		0.0000	0.00010	0.00917				•					1		-0.0091AA
MAS CALL	2000	2000	. 7004	2460	.87041	.84131	.81534	.79231	.77071	.75196	.73376	.71719	.70202	.68733	47424	66178	44021	63801	.62703	.61714	.60722	.59795	.58925	.58066	.57284	.56439	65060	.54367	.53734	.53092	. 52486	11615	0.513378	50277	49770	.49287	.48804	48359	47474	47062	.46649	.46267	.45677	45504	44780	44457	44117	.43792	20464	204	204	5	20464	2046	200	200	10402	SAGE WILL	0.428742
					4:5		-	5.3	5.6	5.8	0	~	*			1			7.5	2.0	1.0	7.9	0.0	8.2				9.8	6.0	0.6	9.2	6.9	19.01	9	7.6	9.6	6.6	0,0		2.0		4.0	0.5	9.0	0		6.0	6.0	NOI	NO.	NOIL	21 04	NCI	NOI	NOIL	200	ABOVE ME	21.13	.2
	20784	2001	10201	17670	.18674	.18076	17537	.17049	16581	0.161682	.15762	15390	15041	.14713	14415	14118	13843	1358	13334	13106	.12878	.12664	.12463	12265	12085	11902	11560	11408	11260		10970	10836	10579	10454	10335	10222	.10109	10005	00707	00460	.0960	.09512	08450	609332	09163	09085	*0060	.08927	LO AT LOC	LO AT LOC		0.088534	D AT LOC	O AT LOC	0	100	TIME THE	0.087787	04100
	A 30F	9	2505	0-3067	.160E-0	.100E-0	.630E-0	3004.	-250E-0	-160E-	-100E-	-30E9	3004	-250E-	-160F-	100E-0	-90E	400E-0	.250E-0	.160E-0	.100E-0	.630E-0	-400E-0	250E-0	-160E-	1000	400F	250E-0	160E-0	-100E-	630E-0	-000	0.1605-09	100E-0	630E-1	400E-1	-250E-1	-160E	4306	400E-1	.250E-1	.160E-1	1006-1	.630E-1	250E-1	-160E-1	-100E-1	.630E-1	XP UNDERF	KP UNDERF	XP UNDERF	106-13	EXP UNDER	UNDER	0	2000	TA THE	100	. I Anf.

0.430E-14 0.08589 21.27 0.425747 0.00958 0.137976 0.425674 0.009987 0.135971 0.425747 0.009987 0.136971 0.425074 0.009987 0.136971 0.425074 0.009987 0.136008 0.135071 0.42508 0.009987 0.136008 0.13508-14 0.0084781 21.48 0.417329 0.009964 0.135028 0.136008 0.135128 0.1008-14 0.083761 21.54 0.412082 0.009798 0.133185

				.0 / 2800.	
BIT FRROP	RATIO	SAR 1N 08	RATIO	DERIV PER	CONSTANT
100F-0	21661	3.2		.01047	2463
0.630E-03	0.207868	13.64	0.950568	-0.007200	0.181234
400F-0	20015	3.9		.00535	0.243840
250F-0	19296	14.29		.00451	0.288810
1605-0	0.186748	4.5		00435	0.299880
.100F-3		14.86		00446	0.292542
.630E-04	17537	5		0.00465	0.280556
-300+		5		*8700*	0.269356
250E-0		15.61		0.00503	0.259439
.160E-04		15.83		0.00518	0.251460
.100E-04		16.05		0.00534	0.244223
.630E-05		16.25		0.00548	0.237978
.400F-05	0.150474	16.45		.00561	0.232469
.250E-05	0.147139	16.65		0.00574	0.227278
0-160F-05	0.144155	16.82		0.00585	0.222730
.100F-05	0,141189	17.00		.00597	0.218272
.630F-06	0,138433	17.18		60900	0.214171
-400E-06	0,135865	17.34		00620	0.210374
1.250E-06	0.133344	17.50		-0.006314	0.206661
.160E-06	0,131068	17.65		00641	0,203319
0.100F-06	0,128785	17.80		-0,006525	0.199974
.630E-07	0,126647	17.95		00662	0.196844
-400E-07	0.124639	18.09		00672	0.193909
.250E-07	0.122654	18.23		-0.006832	0.191008
1-160E-07	0-120850	18.36		00692	0.188372
.100E-07	0.119029	18.49		00102	0.185713
.630F-08	0,117313	8		00712	0.183207
************	0,115692	8		00721	0.180842
.250F-0	0,114081	۵.		-0.007311	0.178490
.160F-0	0,112609	8.9		00140	0.176341
٦.	0,111117	19.08		9	0.174162
	0,109703	2		00758	0.172098
-400E	0,108363	19.30	r,	.00767	0.170141
.250E-0	0,107024	19.41	.513	.00775	0.168187
.160F-0				-	
	04/00100	19.51	21806.	-0.007842	0.166394

ATOR TANDER AND ATOR SAND SAND SAND SAND SAND SAND SAND SAND	* HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	THREE LFVEL EYE I.E. DECISION LEVEL.	LITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.	NOISE TO RMS SIGNAL RATIO.	INAL POWER TO NOISE POWER IN DECIBLES.	IPTIVE THRESHOLD AMPLITUDE TO D RATIO.	STATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO	ISTLINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD	LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES	N BITE RATE = 12552600. AND ERROR SIGNAL	AND ONT OF THE OWNER O
	# HA	=	E AM	# W.	. SI	* AD	a DE	8	Š	Ī	-

TABLES
MONITOR
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RIT FRROR	N / S PATIO	SAR TA DB	RATTO	DERIV PER	TIME
0.630E-10	0,103358	19.71	0.497701	-0.000014	0.162833
0.400E-10	0.102227	19.81	0.492874	-0.008096	0.161181
0.250E-10	0.101094	19.91	0.488043	-0.008180	0.159525
0.160F-10	0.100051	20.00	0.483599	-0.008259	0.158001
0.100F-10	0.098986	50.09	0.479065	-0.008341	0.156444
0.630F-11	0.097971	20.18	0.474746	-0.008421	0.154959
0.400E-11	0.097001	20.26	0.470626	-0.008499	0.153541
0.250E-11	0.096027	20.35	0.466490	-0.008578	0.152116
0.160E-11	0.095128	20.43	0.462676	-0.008653	0.150800
0.100E-11	0.094207	20.52	0.458774	-0.008731	0.149452
0.630E-12	0.093327	20.60	0.455046	-0.008807	0.148163
0.400F-12	0.092485	20.68	0.451482	-0.008881	0.146930
0.250E-12	0.091636	20.76	0.447895	-0.008957	0.145686
0.160E-12	0.090852	20.83	0.444579	-0.009028	0.144536
0.100F-12	9,006000	20.91	0.441178	-0.009103	0.143355
0.630E-13	0.089274	20.99	0.437923	-0.009175	0.142222
0.400E-13	0.088534	21.06	0.434803	-0.009246	0.141136
0.250E-13	0.087787	21,13	0.431656	-0.009318	0.140039
0.160E-13	0,087095	21.20	0.428742	-0.009386	0.139022
0.100E-13	0.086382	21.27	0.425747	-0.009458	0.137976
0.630E-14	0.085699	21,34	0.422874	-0.009527	0.136971
0.400E-14	0.085042	21,41	0.420116	-0.009595	0.136005
0.250E-14	0.084378	21.48	0.417329	*0°009664	0.135028
0.160E-14	0,083761	21.54	0.414744	-0.009729	0.134120
0.100E-14	0.083126	21.61	0.412082	-0.009798	13318
					-

* HALF OF THE NORMAL DISTANCE RETWEEN DATA LEVELS FOR THE THE THREE LEVEL SYET LEVELS	* AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. * RMS NOISE TO RMS SIGNAL RATIO. * SIGNAL POWER TO NOISE POWER IN DECIBLES.	* ADATTIVE THRESHOLD AMPLITUDE TO D RATIO. * DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO. * DUASILINFAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES **HFN BITF RATE = 12562500, AND FRRDR STGNAL	DIVIDER PATIO INTO DIA CONVERTER = 4.
NOMENCLATURE:		A / D RATIO DERIV DER WRT TIME CONSTANT	

		R TIME	0.124481	0.18097	0.24345	0.28833	0.299360	2000	0.26879	0.25887	0.250	0.243	0.237	0.231	0.226	0.222	0.217	0.213	0.209	0.206	0.202	0.199	0.196332	661.0		0.185	0.182	0.180	0.178	0.175	0.173	0.171	0.16975	0.1678	0.16602	0.16420
TABLES	0.1000	DERIV PE	-0.010483				0.004359		0.004855	-0.005041	-0.005201	-0.005356	-0.005497	-0.005627	-0.005754	-0.005874	*66500*0*	-0.006109	-0.0062.	-0.006331	-0.006435	-0.006542	-0.006646	240000	20000	0.001044	-0.007140	-0.007234	-0.007329		-0.007510				-0.007860	-0.007947
BASEBAND EYE PATTERN MONITOR TABLES	DR EQUALS EQUALS 1.0	A / D RATIO	0	.92064		89668	0.870709	•			•	•	•	•	•				•	•	•	•	0.601067	•	•					•	•	•	•	•	.513	.50864
D EYE PATT	TABLE FOR AIDR EQUALS PSEUDO ERROR RATE EQUALS	SNR IN DB	13.37	13.73	14.07	14.39	14.68	18.34	15.49	15.73	15.96	16.18	16.39	16.59	16.79	16.97	17.16	17.33	17.50	17.66	17.81	17.97	18.12	18.70	10.4	18.66	18.79	18.91	19.04	19.15	19.27	19.38	19.49	19.60	19.70	19.80
BASEBAN	PSEUDO	RATIO	0.214535	20	-	-	0.184471		-	.16340		0,155187	•	•	0.144667	٦.	7	٦.	7	-	7	7	0.124202	•	•			٦.	٦.	٦.	7	٦.	7	0.104761	٦.	٦.
		RIT ERROR PATE	0.100F-02	.630E-0	-400E-0	-250E-0	0.160E-03	4305	400E-0	0.250E-04	0.160E-04	0-100E-04	0.630F-05	0.400E-05	0.250E-05	0.160F-05	0-100E-05	0.630E-06	0.400F-06	0.250E-06	0.160E-06	0-100E-06	0.630F-07	0.4001	0 1505-07	0.100E-07	0.630F-08	0.400E-08	0.250E-08	0.160F-08	0.100F-08	0.630E-09	-400E-0	.250E-0	.16	-100E-0

= HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	THE THREE LEVEL EYE I.E., DECISION LEVEL. # AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. # RMS NOISE TO RMS SIGNAL RATIO.	AAL POWER TO NOISE POWER IN DECIBLES.	VATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.	LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER =
HALF	AMPLIT	SIGNAL	DERIVA	WHEN B
NOMFNCLATURE:	AIDR AIDR			

ABLES
TAB
MONITOR
NON
PATTERN
EYE P
BASEBAND
_

	PSEUDO E	LE FOR AID	TABLE FOR AIDR EQUALS 0.1000 PSEUDO ERROR RATE EQUALS 1.0 /	0.1000	
RIT FRROR	RATIO	SNR IN DB	A / D RATIO	DERIV PER	TIME
0.630E-10	0,101148	19.90		-0.000031	0.162480
0.400E-10	0.100034	20.00	9606650	-0.008113	0.160836
0.250F-10	0.098919	50.05		-0.008197	0.159188
0.160F-10	0.097893	20.18	0.490165	-0.008276	0.157670
0.100E-10	0.096846	20.28	0.485802	-0.008358	0.156119
0.630E-11	0.095847	20.37	0.481649	-0.008438	0.154640
0.400E-11	0.094895	20.46	0.477690	-0.008516	0.153228
0.250E-11	0.093938	20.54	0.473716	-0.008596	0.151807
0.160F-11	0.093055	20.63	0.470054	-0.008671	0.150496
0.100E-11	0.092151	20.71	0.466308	.0.008749	0.149152
0.630E-12	0.091287	20.79	0.462731	-0.008825	0.147866
0.400E-12	0.090461	20.87	0.459312	-0.008899	0.146635
0.250E-12	0.089629	20.95	0.455872	-0.008975	0.145394
0.160E-12	0.088859	21.03	0.452694	9,0600.0-	0.144245
0.100E-12	0.088069	21.10	0.449435	-0.009121	0.143065
0.630E-13	0.087313	21.18	0.446316	*0.009194	0.141934
0.400E-13	0.086587	21.25	0.443327	-0.009265	0.140848
0.250E-13	0.085855	21.32	0.440314	-0.009337	0.139751
0.160E-13	0.085177	21.39	0.437524	909600-0-	0.138733
0.1005-13	0.084479	21.47	0.434657	-0.009477	0.137686
0.630E-14	0.083809	21.53	431907	-0.009547	0.136680
0.400E-14	0,083166	21.60	.429268	-0.009615	0.135712
0.250E-14	0,082516	21.67		-0.009685	0.134733
0.160E-14	0,081912	21.73	.424127	-0.009751	0.133823
0.100E-14	0.081290	21.80		-0.009820	0.132885

13431	18052	24278	28750	29846	29106	.27905	26783	25790	16652	99247	11007	22571	22117	21672	21262	.20883	20513	20181	1984	19256	18956	18694	,18429	18180	17945	11//11	172817	17076	.16881	16687	16327	16154	.15989	.15824	15517	15368	.15227	15084	14952	14688	14565	.14440	.14324	.14205	14092	13982	23861	13464	13562	.13465	.13366	.13274	.13179
303010	007228	.005375	004539	004372	004483	.004676	.004872	.005060	122500	12600	616200	005781	00500	006021	.000137	.00624€	.006361	999900	515900	00000	006884	006980	080700	.007177	.007271	100.367	007551 0	.007642	.007730	.007820	00100	000018	.008161	.008246	008400	008491	.008570	.008651	.008727	200000	008959	.00000	.009110	.009186	.009260	266600	105600	044000	00000	169600	697600	068600	106600
PAS CALLED	950771	. 928603	900006	871202	.842376	. 816709 -	. 193998 .	. 772754	734336	730369	20000	691359	678685	666148	. 654558 -	- 908649	. 633292	. 663837	406410	597322	589190	581823	. 574410 -	567445	560887	. 254365	54246	. 536804 -	. 531448	. 526111	516262	511554	. 507081	- 502607	494305	490315	. 486513 .	.482697	. 19180	472150	468868	- 465566 -	.462515 -	.459387	. 456393	453525	- 250054	445202	442562	- 440028 -	.437468	*435093	.43264
C.L. TABLI	9.84	. 18	15.	18.	5.10	5,38	2.63	88.		200	200	96.5	7.15	1.33	7.51	89.	*8*	00.5	30	4.	3.59	3.72	8.85	8.98	11.	24.0	9.46	75.6	89.6	62.6	00.00	0.10	0.19	67.0	4.0	0.57	59.0	7.0	285	00.0	1.07	1,15	1.23	1.30	1.38	5.2	200	1.66	1.73	1.80	1.87	1.93	2.00
OG PRINTOUT P	20317	19536	18807	18178	17573	17028	16534	16063	15647	15239	14600	14189	13891	13595	13321	13067	12817	12592	12154	11050	11764	11587	.11409	11241	11083	10720	0638	10501	10371	10241	10002	09887	.09778	69960	09465	09368	.09274	.09181	*6060*	08921	.08841	.08759	.08684	.08607	.08533	79480.	46600	08255	08190	.08127	.08064	.0800	.07944
IN DEC	630E	4.006-0	250E-0	160E-0	100E-0	.630E-0	400E-0	250E-0	160E-0	100E-0	0-3000	250E	160F-0	100E-0	.630E-0	.400E-0	250E-0	1605-0	A 30E -	4006-0	250E-0	160E-0	.100E-0	630E-0	400E-0	0-2067	0.100E-08	630E-0	400E-0	.250E-0	100F	630E-1	*400E-1	.250E-1	100F-1	630E-1	.400E-1	.250E-1	.160E-1	630E-1	400E-1	.250E-1	.160E-1	.100E-1	-630E-1	2505	1406	1006	630E-1	.400E-1	.250E-1	.160E-1	.100E-1

	BASFBAND FYF	FYF PATTERN	MONITOR	TABLES	
	TABLE PSEUDO FRR	FOR A	E EQUALS 1.0	0.1200	
ALT FRODA	8 / 8	SVR	0 / 4	DERIV PER	TIME
KATE	0114	80 N	KATTS	-	CONSTANT
100F-0	21203	-	96681	01050	421
- 40E 9	20317	13.84	.95077	722	052
0-3005°	٤.		.92860	00537	278
250E-0	19807	4.5	.90003	00453	120
.160F-G	18178	4.8	.87120	0.00437	948
.100F-	175	1.5	.84237	0.00448	106
.630F-0	17028	5.3	.81670	19700	306
	15534	5.5	.79399	00487	783
.250F-0	0.160630	5.8	.77275	0.00506	140
	0.156473	1.9	.75435	0.00522	166
.100F-0	0,152397	6.3	.73654	00537	266
.630F-0	0.148662	•	.72038	0.00551	1991
400F-0	0.145225	6.7	.70561	59500	060
.250F-0	0.141890	6.9	69135	0.00578	571
0-160F-05	0.138913	1.	.67868	0.00590	1117
.100F-0	0.135958	7.3	.66614	0.00602	672
.630F-0	0,133219	7.5	.65455	0.00613	262
400F-0	0.130671	7.6	.64380	00624	883
	0.128174		.63329	-0.006361	513
1605-0	0.125925	8.0	.62383	-0.006466	181
.100F-0	0.123673	8.1	.61438	21	1847
.630F-0	0,121567	8.3	.60557	-0.006679	1536
400E-0	0,119593	8.4	.59732	-0.006781	1544
250E-0	0.117645	8.5	.58919	-0.006884	1956
.160F-0	0,115877	4.1	58185	086900-0-	1694
-100E-0	0.114096	8 . 8	.57441	-0.001080	459
.630E-0	0.112419	8.9	.56744	.00717	1180
400F-0	0,110839	6	.56088	.00727	1945
.250E-0	0,109269	8.5	.55438	.00736	111
-160F-	0,107837	6.3	.54846	.00745	498
100F-0	0.106387	4.6	.54246	.00755	188
-90E9.	0,105015	9.5	.53680	0.00764	1076
-400E-0	0,103715	9.6	.53144	0.00773	881
250F-0	0.102419	19.79	0.526111	0	0.156875
-160F-	0,101231	8.6	.52122	.00790	209
.100F-0	0.100022	c.c	.51626	6640	327

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	4						AA				
	-						c.				
	* HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	THE THREE LEVEL EYE I.E. DECISION LEVEL.	* AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.	= RMS NOISE TO RMS SIGNAL RATIO.	= SIGNAL POWFR TO NOISE POWER IN DECIBLES.	= ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.	= DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A	E DUASILINFAR TIME CONSTANT OF THE ADAPTIVE THRESHOL	LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES	WHEN BITE PATE . 12552600. AND ERROR SIGNAL	DIVIDER RATTO INTO DIA CONVERTER .
NOW PACKATORE.				RATIO		RATIO	DERIV PER WAT	TIME CONSTANT			
NALCE	0		ATOR	N / S RATIO	SNR	0 / W	DERIV	TIME CI			

TABLES	
MONITOR	
PATTERN	
FYE	
ASFBAND	

	PSEUDO F	LE FOR ATO	TARLE FOR AIDR EQUALS 0.1200 PSEUDN FRROR RATE EQUALS 1.0 / 2800.	0.1200	
BIT FRROP PATE	RATTO	SNR TN DB	RATIO	DERIV PER	TIME
0.630E-10	0.098875	20.10	0.511554	-0.008078	0.161544
0.400E-10	0.097783	20.19	0.507081	-0.008161	0.159898
0.250E-10	0.096690	20.29	0.504607	-0.008246	0.158247
0.160F-10	0.095685	20.38	0.498497	-0.008326	0.156726
0.100E-10	0.094659	20.48	0.494305	-0.008409	0.155172
0.630E-11	0.093682	20.57	0.490315	-0.008491	0.153689
0.400E-11	0.092749	20.65	0.486513	-0.008570	0.152271
0.250E-11	0,091812	20.74	0.482697	-0.008651	0.150846
0.160E-11	0.090948	20.82	0.479180	-0.008727	0.149529
0.100E-11	990060	20.91	0.475584	-0.008806	0.148179
0.630E-12	0,089218	20.99	0.472150	-0.008884	0.146887
0.400F-12	0.088410	21.07	0.468869	-0.008959	0.145650
0.250E-12	0.087596	21.15	0.465566	-0.009037	0.14402
0.160E-12	0,086843	21.23	0.462515	-0.009110	0.143246
0.100E-12	0.086070	21.30	0.459387	-0.009186	0.142059
0.630E-13	0,085330	21,38	0.456393	-0.009260	0.140920
0.400E-13	0,084621	21.45	0.453525	-0.009332	0.139827
0.250E-13	0.083905	21.52	0.450632	10,000.0-	0.138722
0,160E-13	0.083241	21.59	0.447954	-0.009477	0.137697
0.100E-13	0.082559	21.66	0.445202	-0.009550	0.136641
0.630E-14	0.081904	21.73	0.442562	-0.009621	0.135626
0.400E-14	0.081275	21.80	0.440028	-0.009691	0.134651
	0,08060	21.87	0.437468	-0.009763	0.133663
0.160E-14	0,080049	21,93	0.435093	-0.009830	0.132744
0.100F-14	0.079441	22,00	0.432648	-0.009901	0.131797

* MALF OF THE MORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	= AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. # RMS NOTSE TO RMS SIGNAL RATIO. # SIGNAL NOTSE TON NOTSE DOMER IN DECIBLES. # ADADTIVE THRESHOLD AMPLITUDE TO D RATIO. # DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO. # DUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LODP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER =	
NOMENCLATURE:	AIDR N / S RATIO SAID A RATIO DERIV PER WRT TIME CONSTANT	

12380	17982	24176	.28623	.29707	28962	27759	256635	3,041	24116	23490	22938	.22419	.21964	.21518	.21108	20729	2002	970079	19381	19088	.18800	18537	18672	17787	.17553	.17339	271710	16721	.16526	.16346	16164	15825	15659	15506	15350	0.150583	.14914	.14782	14516	14391	.14266	14149	14030	13805	13694	13590	13484	13382	13184	13001	2
0.01054	0.00725	0.00539	0.00455	0.00439	050000	0.00410	0.00489	20000	00000	0.00555	0.00568	0.00582	0.00594	9090000	0.00618	0.00629	0,00640	16900-0	0.00673	0.00683	0.00694	0.00703	0.00714	0.00733	0.00743	0.00752	0.00762	0.00780	0.00789	0.00798	0.00807	0.00816	0,00833	0.00841	0.00850	-0.008666	0.00874	0.00882	0.00808	90600-0	0.00914	0.00922	0.00930	59600-0	0.00952	09600 0	0.00967	0.00975	0.00989	0000	001000
921	.95097	.92893	.90056	.87194	.84337	.81797	77480	*****	73000	72314	-7086R	.69475	.68238	.67017	.65889	.64843	.63823	00679	41137	.60339	.59553	.58841	58125	56821	.56194	.55623	64066	53984	.53470	.52999	.52521	51637	.51207	.50811	.50407	0.496576	.49290	.48951	48274	.47958	049240	.47346	47044	. 46479	.46200	2+664.	.45677	229699	44931	44701	****
13.59	3.9		4.6	4.9	2.5		200		9	6.7	6.9	-	7.3	7.5	1.1	8.6			8		8.7	6.0		3.	4.6	9.5	0.0	. 6	000	-	200			5.0	0 0			•	::	1.2		7.		1.6	1.7			2.0	2.0	2.1	2.2
0.209139	22002	19236	.18503	.17872	17265	16719	15756	16330	14933	14562	14220	13889	13594	13301	13031	12779	12333	120001	11882	11688	11496	11323	1000	10828	10674	10534	10392	10131	.10004	18860	9460	09550	09443	09345	64760	09058	.08967	.08882	08713	.08634	.08555	.08481	08406	.08264	.08194	.08129	69080	07037	07875	07818	07758
15 17 E	0-30E9.	0-3005.	.250E-0	.160E-0	100E-0	0-30E9	2506	0 3077	1006-0	630E-0	400E-0	.25nE-	.160E-0	-100E-0	.630E-0	0-3004.	250E-0	1005	630E-0	400E-0	.250E-0	.160E-0	1005-0	4006-0	-250E-0	.160E	1001-0	400E-0	-250E-0	.160E-0	. 100E-0	. 400E-1	.250E-1	.160E-1	1001-	0.4006-11	-250E-1	-160E-1	630E-1	.400E-1	.250E-1	.160E-1	AAOF	-400E-1	.250E-1	. 160E-1	-100E-1	6 30E -1	2505-	LANE	100

1-71

	BASFBAND	EVE PATTE	BASEBAND EYE PATTERN MONITOR TABLES	ABLES		
	PSEUDO F	LE FOR ATE	TABLE FOR AIDR EQUALS 0.1400 PSEUDO FRROR RATE EQUALS 1.0 /	0.1400		
RIT FRROR	N / S RATIO	SAR 18 DB	RATTO	DERIV PER	CONSTANT	
0.100F-02	0,209139	13.59	0.966921	-0.010540	0.123806	
0.630F-03	0,200222	13.97	0.950970	-0.007257	0.179823	
0.400F-03	0.192365	14.32	0.928938	-0.005398	0.241760	
0.250F.03	0.185036	14.65	0.900561	-0.004559	0.286231	
0.160E-03	0.178721	14.96	0.871946	-0.004393	0.297074	
0.100F-03	0.172654	15.26	0.843375	-0.004505	0.289628	
0-630E-04	0.167197	15.54	0.817978	-0.004701	0.277590	
0.400E-04	0.162260	15.80	0.795545	-0.004899	0.266357	
0.250F-04	0.157546	16.05	0.774599	-0.005089	0.256416	
0 1405-04	0.153307	14.28	0.756403	-0.005253	0.248418	

0.100F-02	0.209139	13.59	0.966921	-0.010540	12380
.630F-03	0,200222	13.97	5097	-0.007257	0.179823
\$ 400F-03	0.192365	14.32	0.928938	-0.005398	0.241760
250F-03	0.185036	14.65	0.900561	-0.004559	0.28623
1.160E-03	٦.	14.96	0.871946	-0.004393	
100F-03	0.172654	15.26	0.843375	-0.004505	~
0-630E-04	-	15.54	0.817978	-0.004701	
\$0-300+°C	-	15.80	0.795545	-0.004899	~
3.250F-04	٦.	16.05	0.774599	-0.005089	~
0.160E-04	-	16.28	0.756493	-0.005253	~
0.100F-04	-	16.52	0.739001	-0.005411	~
0.630E-05	7	16.74	0.723149	-0.005555	
\$0-300+°	0.142204	16.94	8980	-0.005689	
0.250E-05	0.138895	17.15	0.694756	-0.005821	
0.160E-05	0,135944	-	0.682387	-0.005941	
0.100F-05	0.133019	-	0.670170	-0.006064	
0.630F.06	0,130310		0.658890	-0.006182	
90-300+°C	0.127793	-	0.648439	-0.006295	0.207297
1.250E-06	0.125330		0.638232		
0.160E-06	0,123112	Œ	0.629061		0.200262
0-100E-06	0.120894	œ	0.619907	-0.006626	0.196928
0.630F-07	0,118822	18.50	0.611371		
10-30U+0	0,116881	8	0.603391	00683	٦.
0.250E-07	0.114967	8	0.595531	-0.006941	٦.
7.160E-07	0,113230	8	0.588414	-0.007039	0.185377
1.100F-07	0,111482	19.06	0.581257	00714	٦.
0.630E-08	0.109837	19.19	0.574536	-0.007240	
-400F-	0,108287	19,31	0.568211	30733	17787
0.250F-08	0,106749	19.43	0.561941	-0.007434	17553
0.160F-08	0.105346	19.55	0.556231	30752	17339
.100F-0	0,103925	19.67	0.550455	-0.007621	.17122
0.630E-09	0.102582	19.78	0.545001	-0.007714	16916
-400E-0	0.101310	19.89	0.539841	0	7
0.250F-09	0.100042	20.00	0.534702	-0.007896	16526
.160E-0	0.098879	20.10	0.529998	8	
0.100F_00	0.007697	20.20	0.525218	FL0800-01	0 14444

	= MALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF	EYE I.E. OFCISION LEVEL.	# AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.	SIGNAL RATIO.	OISE POWER IN DECIBLES.	D AMPLITUDE TO D RATIO.	UDO ERROR RATE WITH RESPECT TO A / D RATIO.	- DUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD	ANGES AROUND STEADY STATE VALUES	12552600. AND EPROR SIGNAL	DIVIDER PATIO INTO DIA CONVERTER #	
	E HALF OF THE NORM	THE THREE LEVEL	E AMPLITUDE OF INT	E RMS HOISE TO RMS	SIGNAL POWER TO	ADAPTIVE THRESHO	DERIVATIVE OF PS	. DUASILINEAR TIME	LOOP FOR SMALL C	WHEN BITE RATE =	DIVIDER PATIO IN	
NOMENCLATURE:			ATDR	N / S RATIO	SNR	A / D RATIO	DERIV PER WRT	TIME CONSTANT				

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	PSEUDO E	TAMLE FOR AIDP EQUALS PSEUDN ERROP RATE EQUALS		1.0 / 2800.	
RIT FRROP RATE	RATTO	SNR 1 08	A / D RATIO	DERIV PER	TIME
0.6306-10	0.096575	20.30	0.529685	-0-008160	0.159907
0.400E-10	0.095507	20.40	0.516379	-0.008246	0.158252
0.250E-10	0.094439	20.50	0,512072	-0.00R333	0.156593
0.1605-10	0.093456	20.59	0.508115	-0.008415	0.155064
0.100F-10	0.092453	20.48	0.504079	-0.008501	0,153501
0.630F-11	0.091498	20.17	0.500238	-0.008584	0.152009
0.4006-11	0.090586	20.86	0.496576	-0.008666	0,150583
0.2506-11	0,089671	20.95		-0.008749	0.149149
0.160F-11	0.088826	21.03	0.489515	-0.008827	0.147824
0.100F-11	0.087962	21.11	0.486051	-0°008000	0.146465
0.630E-12	0,087136	21.20	0.482744	-0°008989	0.145164
0.400E-12	0.086346	21.28	0.479582	-0.00000	0,143918
0.250E-12	0,085551	21.36	0.476401	-0.009147	0.142662
0.160F-12	0.084815	21.43	0.473461	-0.009222	0.141498
0.1006-12	0.084061	21.51	0.470446	-0.009301	0.140302
0.6306-13	0.083338	21.58	0.467561	-0.009377	0.139155
0.400E-13	0.082645	21.66	0.464796	-0.009452	0.138053
0.250F-13	0.081945	21.73	0.462007	-0.009529	0.136940
0.1605-13	0.081297	21.80	0.459424	-0.009601	0.135907
0.100E-13	0.080631	21.87	0.456770	-0.009677	0.134844
0.630E-14	0.079992	21.94	0.454224	-0.009751	0.133822
0.400E-14	0.079377	22.01	0.451780	-0.009823	0.132839
0.250E-14	0.078756	22.07	0.449310	-0.009897	0.131844
0.160E-14	0.078180	22.14	•	-0.009967	13091
0.100E-14	0.077586	22.20	0.444658	-0.010040	0.129965

		* ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO. * DERIVATIVE OF PSEUDO ERROR RATE WITH PESPECT TO A / D RATIO. * DUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD **LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES **HEN RITE PATE ** **LOOP FOR SMALL	
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THE OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	# AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. # RMS NOISE TO RMS SIGNAL RATIO. # SIGNAL POWER TO NOISE POWER IN DECIBLES.	ALL ALL	DIVIDER RATIO INTO DIA CONVERTER =
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P. DE	550	FOR	2
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NOMENCLATURE:	ATDR N / S RATIO SNR	A / D RATIO DERIV DER WRT TIME CONSTANT	
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13330	17081	24020	28440	29509	.28758	.27551	.26427	26430	23004	23277	.22725	.22204	.21748	10612.	20671	20140	.19806	.19472	.19160	18577	18314	.18049	.17799	.17562	.17327	71111	16687	16491	.16295	.16116	.15932	.15758	76441.	15272	15115	.14965	14822	14545	14409	.14279	.14154	87.71	0.137919	13677	.13566	13455	13351	.13245	1314	13044	12852	: -:
9	466600	0 00643	00458	0.00442	0.00453	0.00473	0.00493	0.00529	0.00545	0.00560	0.00574	0.00587	0.00000	0.00612	*2900 0	0.00647	0.00658	0.00670	0.00681	0.00702	0.00712	0.00723	0.00733	0.00743	0.00753	29/00 0	0.00782	0.00791	0.00000	0.00809	0,00819	0.00828	0.00836	0.00854	9.00 G	0.00871	0.00880	0.00889	0.0000	0.00913	0.00921	06600	20	0.00954	1960000	6960000	77600°0	\$8600	266000	0001000	01000	22
MAS	96125	02041	90130	87298	.84475	.81971	.79763	75037	74221	72673	.71263	10669.	.68705	.67518	45411	64423	.63536	.62650	61825	60205	59608	58917	.58268	.57658	57053	55045	55418	54920	.54424	.53970	. 53509	53071	52656	51857	.51469	.51096	50743	20000	49725	49405	66067	26184	48215	47936	4766R	47398	47148	16891	****	46407	45044	45717
				5.1	3	5.	5.0	9.4			7.	7.3	2.5			8.2	4.8	8.5			. 6	9.2	9.3	9.5	9.		0 0		0.2		4.	5.0			8.0	6.0		::		1.4	4.			1.7	1.8	1.9	2.0	5.0	2.1	7.5	200	22.42
PRINT	10400	10001	18166	17534	.16927	.16383	15891	15010	14407	14239	13901	.13575	.13284	12795	12481	12239	12021	.11804	11601	11223	11054	10692	10722	10570	10420	10144	10012	09660	.09764	.09651	.09535	09426	12660	09121	62050	.08930	08841	26780	08585	.08504	.08427	64680	18204	08133	99080	86620	.07934	.07869	07807	07747	07430	0.075725
30	2064	TOUE	250F-0	160E-0	.100E-0	-90E9.	4005-0	140F-0	100F	630E-0	.400E-0	.250E-0	-160E-0	100E-0	400F	250E-0	-160E-0	.100E-0	630E-0	250E-0	160E-0	100E-0	.630E-0	400E-0	250E-0	1006	6305-0	400E	250E-0	.160E-0	100E-0	.630E-1	1000	140F-1	1006-1	.630E-1	1-3001	1406	1005-1	630E-1	400E-1	250E-1	-	630E-1	400E-1	.250E-1	.160F-1	.100E-1	630E-1	4005-1	140E-1	0.1005-14

	TIME	.12320	17881	.24028	.28440	.29509	.28758	.27551	.26427	.25432	.24631	.23904	.23277	.22725	*5220*	.21748	21301	16807	11607	504107-0	19472	.19160	.18866	.18577	.18314	.18048	.17798	.17562	.17327	.17112	.16894	.16687	16491	.16295	.16116
1.0 / 2800.	DERIV PER	.01059	.0072	00543	-0.004588	-0.004422	-0.004538	-0.004736	-0.004938	-0.005131	-0.005298	-0.005459	-0.005606	-0.005742	-0.005877	000900	-0.006126	-0.006246	2000000	0.00000	0.006701	-0.006811	-0.006916										-0.007912		-0.008097
	PATTO	0.967083	0.951256	0.929412	0.901300	0.872983	0.844754	0,819711	0.797637	0.777069	0.759325	0.742215	0.726736	0.712639	0.699076	0.687051	0.675188	0.664246	81146000	0.544234	0.626508	0.618257	0.6:0547	6.602956	0.596085	0.589176	0.582689	0.576584	0.570535	0.565024	0.559451	0.554188	0.549208	0.544248	0.539708
TABLE FOR AIDR EQUALS PSEUDO FRROR RATE EQUALS	SNR IN DB	13.73	14.11	14.47	14.81	15,12	15.43	15.71	15.98	16.24	16.47	16.71	16.93	17.14	17.35	17.53	17.72	17.90		18.24	18.56	18.71	18.85	19.00	19.13	19.27	19.39	19.52	19.64	19.76	19.88	19.99	20.10	20.21	20.31
TABI PSEUDO FI	PATTO	0,205866	0.196905	0.189016	0.181668	0,175345	0.169279	0,163832	0,158913	0.154223	0,150103	0.146076	0.142395	0,139018	0,135750	0.132840	0.129959	0.127293	618471.0	0.120222	0.118047	0.116015	0.114114	0.112239	0,110540	0.108829	0.107220	0.105705	0.104201	0,102830	0.101441	0.100129	0.098886	0.097647	0.096512
	IT FRROP	00E-02	30E-03	DOF-03	50F-03	50E-03	00E-03	30E-04	00E-04	50E-04	\$0E-04	00E-04	30E-05	00E-05	50E-05	60E-05	50-300	305-06	000000	0 1406-06	00E-06	30E-07	TO-300	50E-07	60E-07	00E-07	30F-08	90E-08	50E-08	60F-08	00E-08	30E-09	60-300	50F-09	60E-00

- HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	# AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. # RMS NOISE TO RMS SIGNAL RATIO. # SIGNAL POWER TO NOISE POWER IN DECIBLES. # ADAPTIVE THRESHOLD AMPLITUDE TO RATIO. # DERIVATIVE OF PSEUDO ERROR MATE WITH RESPECT TO A / D MATIO. # QUASILINEAR TIME CONSTANT OF THE MADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES # NAMEN BITE RATE # 1 2592460. # NAMEN BITE # 1 2592460. # NAMEN BITE RATE # 1 2592460. # NAMEN BITE # 1 2592460.	DIVIDER ACTIO INTO DAY CONVENIER A
NOMENCLATURE:	AIDR N / S RATIO SHR A / D RATIO DERIV DER WRT TIME CONSTANT	

BASEBAND FYF PATTERN MONITOR TABLES TABLE FOR AIDR EQUALS 0.1600 PSEUDO ERROR RATE EQUALS 1.0 / 2800.		
FYF PATTERN MONITOR T LE FOR AIDR EQUALS RROR RATE EQUALS 1.0		
LE POR ATOR	TABLES	0.100
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BASEBAND PYF PATT TABLE FOR AT PSEUDO ERROR RATE		80
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TIME	0.157585	0.154250	0.152724	0.151155	0.149658	0.148228	0.146789	0.145459	0.144096	0.142792	0.141543	0.140283	0.139117	0.137919	0.136770	0.135666	0.134552	0.133518	0,132454	0.131431	0.130448	0.129453	0.128529	0.127575
DERIV PER	-0.008281	0.008369	-0.008544	-0.008633	-0.008719	-0.008803	068800-0-	-0.008971	950600*0-	-0.009139	-0.009219	-0.009302	-0.009380	-0.009461	-0.009541	-0.009619	-0.009698	-0.009773	-0.009852	-0.009928	-0.010003	00010.0	-0.010153	-0.010229
A / D RAT10	0.530718	0.522400	0.518578	0.514680	0.510968	0.507430	0.503878	0.500604	0.497255	0.494056	8660650	0.487920	0.485076	0.482158	0.479365	0.476688	0.473987	0.471486	0.468915	0.466448	0.464079	0.461685	0.459463	0.457175
SNR IN DB	20.51	20.71	20.80	20.89	20.98	21.07	21,16	21.24	21.32	21.41	21.49	21.57	21.64	21.72	21.79	21.87	21.94	22.01	22.08	22,15	22,22	22.29	22.35	25.42
RATIO	0.094261	0.092176	0.091216	0.090237	0.089304	0,088415	0.087521	0.086697	0.085853	0.085047	0.084276	0,083499	0,062781	0.082045	0.081339	0,080663	0.079980	0.079348	0.078697	0.078073	0.077474	0.076867	0.076305	0,075725
BIT FRADE	0.6306-10	0.2506-10	0.160E-10	0.100E-10	0.630E-11	0.400E-11	0.250E-11	0.1606-11	0.100E-11	0.630E-12	0.400E-12	0.250E-12	0.160E-12	0.100E-12	0.630E-13	0.400E-13	0.250E-13	0.160E-13	0.100E-13	0.630E-14	0.400E-14	0.250E-14	0.160E-14	0.100E-14

NOMENCLATURE:

HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THREE LEVEL EYE I.E., DECISION LEVEL.

AIDR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

N / S RATIO = RAS NOISE TO RAS SIGNAL RATIO.

S.R = SIGNAL POWER TO NOISE POWER IN DECIBLES.

A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.

DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.

TIME CONSTANT = DUASILINEAR THE CONSTANT OF THE ADAPTIVE THRESHOLD

LOOP FOR SMALL CHANGES AROUND STADE VALUES

WHEN BITE RATE = 12592600. AND ERROR SIGNAL

DIVIDER RATIO INTO D/A CONVERTER = 4.

	.12239	.17745	.23830	.28195	.29243	.28484	27276	16107	26354	23626	.22999	.22445	.21923	9917	61012	80902	122020	19521	19186	.18873	.18580	.18289	97081		17273	17038	.16823	16605	16398	16202	15827	15644	15469	.15304	.15137	14984	14678	14536	.14392	.14260	47141	13870	13745	.13629	.13510	13396	13286	61317	12967	.12866	.12768	.12670	0.125784	12484
ED.	-0.01066	.00735	0.00547	0.00462	9990000	0.00458	0.00478	440000	0.00535	0.00552	0.00567	0.00581	0.00595	0.00607	0.00620	0.00633	240000	0.00668	0.00680	0.00691	0.00702	0.00713	0.00723		0.00755	0.00765	0.00775	0.00785	0.00795	508000	42900	0.00834	0.00643	0.00852	0.00862	0.00670	00000	0.00697	9060000	0.00915	6260000	0.00000	0.00949	0.00957	59600.0	44600.0	2860000	06600	001000	0.01014	.01022	0.01029	-0.010374	.01045
E WAS CALL	.967304	.951	.93004	.90227	.87433	.84653	.82193	2000	76283	.74615	.73109	.71739	.70422	. 69255	.68106	94049	00000	64251	.63395	.62597	.61852	.61118	*6000	00160	58560	.57984	.57451	.56911	.56402	.55920	55001	56556	54130	.53728	.53325	.52954	52217	51874	.51529	.51212	190887	50270	18664	.49704	.49421	.49150	06884	97994	48135	.47895	.47665	.47432	0.472163	
-	3.8	4.2	•	6.	5.3	2.6	5.0		9	6.9	:	7.3	7.5					9	1.0	6.0	0.6	2.6			10	8.6	6.0	0.0	2.0				7	8.0	6.0	•		1.2	1.3	*	•	1		:		2.0	0.7	,,,	2.5	2.3	2.4	2.5	22.97	•
RINT	.20224	19325	.18535	17801	17170	16566	.16024	16072	14664	14267	13904	.13572	13251	12965	12682	17971	11043	11729	11516	11317	111131	10948	10782	1001	10310	10163	10030	76860	.09766	96645	00413	00160	09194	26060	06680	6080	08710	08623	.08936	.08456	606973	08220	.08144	.08074	20080	.07933	9810	01110	.07675	.07615	.07556	-07497	0.074429	.07386
IN DE	.100E-0	.630E-0	-400E-0	.250E-0	.160E-0	.100E-0	.630E-0	2505	160E-0	100E-0	0-30E9.	0-30GT	-250E-	.160E-0	100E-0	0.306.0	36.06	1605-0	-100E-0	.630E-0	0-300+*	250E-0	1906-0	73001	400E-0	250E-0	.160E-0	.100E-0	6 30E-0	0-3004	1406-0	1005-0	630E-1	.400E-1	.250E-1	1606-1	630E-1	400E-1	.250E-1	-160E-	1000	400E-1	.250E-1	.160E-1	1006-1	.630E-1		1406	1006	.630E-1	.400E	-290E-1	0.1605-14	•100E-

5	2800.	DED IV DED
TABLE	91.00.	
MONITOR	SDUALS 1	
BASEBAND FYE PATTERN MONITOR TABLES	TABLE FOR AIDR EQUALS 0.1800 PSEUDO FRROR RATE EQUALS 1.0 / 2800.	979
NO EYE	ABLE FO	
BASEBA	PSEUDO	

B14 F0000	S / Z	NNS	0 / 4	4	TIME
RATE	RATIO	1N 08	RATIO	WRT A / D	CONSTANT
0.1008-02		3.8	96730		
0.630E-03		14.28	٠.		
0.400E-03	0.185358	14.64	93004	-0.005476	0.238309
0.250E-03	•	14.99	٠.		
0.160E-03		15.30	.87433		
0.100E-03		15.62	.84653		
0.630E-04		15.90	.82193		
0.400E-04		16.17	.80028		
0.250E-04		16.44	.78016		
0.160E-04		16.67	.76283		
0.100E.04		16.91	.74615		
0.630E-05		17.14	.73109		
0.400E-05	•	17.35	.71739		
0.250E-05		17.56	0.704222		
0.160E-05		17.74	.69255		
0.100E-05	•	17.94	.68106		
0.630E.06	•	18.12	.67046		
0.400E-06	•	18.29	.66066		
0.250E-06		18.46			
0.160E-06		18.61	15249.		
0.100E-06	•	18.77	63395		
0.630E-07		18.92	.62597		
0.400E-07	•	19.07	.61852		
0.2506-07		19.21	٠.		
0.160E-07		19,35	.60454		
0.100E.07		19.48	. 59786		
0.630E-08	•	19.61	r.		
0.400E-08		19.73	.58569		
0.250E-08		19.86	.57984		
0.160F-08			.57		
0.100E-08	•	0.0	.56911		
0.630F-09		0.2	.56402		
0.400F-09	•	0.3	.55920		
0.250F-09		4.0	.55440		
0.160F-09		20.52	.55001		
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	- MALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF	THE THREE LEVEL EYE I.E., OFCISION LEVEL.	* AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.	# RMS NOISE TO RMS SIGNAL RATID.	* SIGNAL POWER TO NOISE POWER IN DECIBLES.	* ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.	* DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.	# DUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD	LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES	WHEN BITE RATE = 12552600. AND ERROR SIGNAL	DIVIDER RATIO INTO DIA CONVERTER #	
יווייייייייייייייייייייייייייייייייייי	0		ATDR	N / S RATIO	SHR	A / D RATIO	-	TIME CONSTANT				

TABLES
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	PSEUDO P	MANON MATE	PSEUDE FRAUE FAUNTE FOUNTS 1.0 / 2800.	7 2800.	
RIT FRROR	S / N	SNR	0 / V	DERIV PER	TIME
RATE	RATTO	1 0B	RATIO	WRT & / D	CONSTANT
0.630F-10	٠,	20.73	0.541308	-0.008435	0.154698
0.400E-10	0.090923	20.83	0.537280	-0.008527	0,153040
0.250F-10	•	20.02	0.533251	.0.008620	0.151377
0.1606-10	0.088970	21.02	0.529547	-0.008708	0.149846
0.100E-10	•	21.11	0.525769	-0.008800	0.148281
0.630F-11	0.087105	21.20	0.522171	-0.008890	0.146788
0.400E-11	0.086237	21.29	0.518740	-0.008977	0.145362
0.250E-11	0,085365	21.37	0.515296	990600*0*	0.143928
0.160F-11	0.084561	21.46	0.512120	-0.009151	0.142603
0.:00E-11	0.083738	21.54	0.508870	-0.009239	0.141246
0.630F-12	0.082952	21.62	0.505767	-0.009324	0.139948
0.400F-12	0.082200	21.70	0.502799	*0°000°0*	0.138705
0.250E-12	0.081443	21.78	0.499811	*6*600*0*	0.137452
0.160E-12		21.86	0.497049	*0.009574	0.136292
0.100F-12	0.080024	21.94	0.494216	*0.009659	0,135101
0.630F-13		22.01	0.491503	-0.009741	0,133960
0.400F-13		22.08	0.488903	-0.009821	0.132864
0.2506-13		22.16	0.486280	*06600*0*	0.131758
0.160E-13	•	22.23	0.483849	-0.009982	0.130731
0.100F-13	0.076759	22.30	0.481351	-0.010063	0.129675
0.630E-14	•	22.37	0.478953	-0.010142	0.128661
0.400E-14	•	22.43	0.476651	-0.010220	0.127687
0.250E-14	•	22.50	0.474323	-0.010299	0.126700
0.160E-14	0.074425	22.57	0.472163	-0.010374	0.125784
0.100E-14	•	22.63	0.469938	.0.010453	0.124840

NOMENCLATURE:

HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THREE LEVEL EYE I.E., DECISION LEVEL.

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SIGNAL POWER TO NOISE FOWER TO BETRIES.

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DERIVET HE SHOUND SERVING THE MADITUDE

DERIVET HE SHOUND THE BOWER TO BE ADAPTIVE THRESHOLD

LOOP FOR SMALL CHANGES AROWN STREAM STATE VALUES

WHEN BITE RATE

DIVIDER RATIO INTO D/A C.WVERTER

4.

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.503645 = 0.000984 0.13C
.501202 .501202 .498718 .0.010032 0.128 .49872 .0.01031 0.128 .49384 .0.010383 0.128 .48934 .0.010463 0.124 .484974 .0.010452 0.123 .484977 .0.010763 0.122

496352 = 0.010217 0.127 493920 = 0.010301 0.126 49394 = 0.010303 0.125 483074 = 0.010663 0.125 484974 = 0.010663 0.123 482877 = 0.010703 0.127
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TABLES
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TABLE FOR AIDR EQUALS 0.2000 PSEUDO ERROR RATE EQUALS 1.0 / 2800.

PATE	2 / 5	SAR SAR	0 / 4	DERIV PER	TIME
A .	01144	90 2	CILLY	-	CONSTAN
0-3001	0,198317	14.05	٥.	01075	
530E-0	0.189321	14.46		.00742	
0.400E-03	0.181432	14.83	0.930844	-0.005535	0.235775
250F-0	0,174113	15.18	٠.	99700	0.278827
160E-0	0.167841	15.50	•	.00451	
100F-0	0.161850	15.82	•	.00463	
630E-0	0.156492	16.11		.00484	
400E-0	0.151671	16.38	•	.00500	
0.250E-04	0.147093	16.65	٦.	.00526	
0.160F-04	0.143084	16.89	٦.	.00543	
0.100F-04	0.139177	17.13	٦.	.00500	
0.630F-05	0,135617	17.35	٦.	.00576	
0.400E-05	0.132358	17.57	٦.	00500	
0.250F-05	0,129211	17.77	٦.	*0900	
0.160F-05	0.126414	17.96	٠.	.00617	
0.100E.05	0,123649	18.16		.00631	
0.630E-06	0.121094	18.34	•	**900	
0.400E-06	0.118727	18.51	٠.	95900	
0.250E-06	0,116413	18.68	٠,	89900	
0.160F-06	0.114334	18.84	٠.	08900	
0.100E-06	0.112257	19.00	٠.	,00692	
0.630E-07	0.110320	19.15	٠.	,00704	
0.400E-07	0.108507	19.29	٠.	.00715	
0.250E-07	0.106720	19.44	٠.	.00727	
0.160F-07	0,105102	19.57	٠,	16700	
0.100E-07	0,103472	19.70	٠.	00749	
0.630E-08	0.101941	19.83	86009	09200	
0.400E-08	0,100498	19.96	.595264	-0.00770	
0.250E-08	19066000	20.08	.58959	-0.00781	
0.160E-08	0.097763	20.20	.58442	16400	
0.100F.08	0.096442	20.31	.57920	20800	
630F-0	0.095194	20.43	.57426	00812	
400E-0	0.094012	20.54	.5695	-0.008223	
250F-0	.09283	50.65	.56493	00832	
160E-0	.09175	20.75	.56066	.00842	
0		-			

** HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THEE LEVEL EYE I.E., DECISION LEVEL.

** AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

** SIGNAL POWER TO NOISE POWER IN DECIBLES.

** ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.

** DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.

** DOUSTINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE INTO D/A CONVERTER = 12552600. N / S RATIO 5:18 A / D RATIO DERIV PER WRT NOMENCLATURE: ATOR

TABLES
MONITOR
PATTERN
FYE
SASEBAND

	PSEUDO	BLE FOR AID ERROR RATE	TABLE FOR AIDM EQUALS 0.2000 PSEUDO ERPOR PATE EQUALS 1.0 / 2800.	0.2000	
RIT FRROR	S / N	SNR	0 / 4	DERIV PER	TIME
RATE	PATIO	1x 08	RATIO	WAT A / D	CONSTANT
0.630E-10	0,089613	20.95	0.552214	-0.008618	0.151410

NOMENCLATURE:

HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THREE LEVEL EYE I.E., DECISION LEVEL.

AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

RMS NOISE TO RMS SIGNAL RATIO.

ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.

DEPIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.

DUASILIANAL THE CONSTANT OF THE ADAPTIVE THRESHOLD

LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES

HEN BITE RATE = 12552600. AND ERROR SIGNAL

DIVIDER RATIO INTO D/A CONVERTER * 4. ATDR N / S RATIO SNR A / D RATIO DERIV PER WRT TIME CONSTANT

	11999	33344	27400	28491	27714	26509	25388	24397	23598	.22873	15227	21694	20710	20272	19862	19484	19114	18782	18449	17848	17561	17300	17038	16790	16325	16114	.15899	15696	15312	15136	14957	14787	14462	14313	.14160	14015	0.138768	13608	.13477	13351	14100	12997	12881	17721	1255	12459	12357	.12260	12021	11083	11892
	201087	20000	00000		00440	00000	0.00514	0.00534	0.00553	0.00570	0.00586	0.00601	0.00616	67900	0.00657	0.00669	0.00682	9690000	0.00707	00.00.19	0.00743	0.00754	0.00765	7770000	00,00	0.00809	0.00820	0.00831	0.00852	0.00862	0.00872	0.00882	0.0000	0.00911	0.00921	0.00931	0.009404	0.00958	0.00968	0.00977	0000000	0.0100	0.01013	12010-0		0.01047	0.01055	0.01064	2010-		01007
LE MAS CA	90 795	93181	90400	700	06130	82776	80714	78803	.77163	15588	.74168	72878	71640	49464	68471	67551	.66654	.65849	65046	43507	62908	.62284	61656	61066	59960	59459	.58951	58471	99525	57150	.56728	56328	55567	55217	.54860	.54520	0.538698	53569	.53261	52767	52404	52142	.51873	51616	61121	50891	.50654	.50427	50208		1007
YOUT . TAG	*			::		3	5.6	5.8	:	2.3		-			5.0	4.1	6.0	0	2.6		9.6	8.6	6.6	•		*	0.5	9.0			0:	::			1.5	9.1	21.83	. 6:	1.9	20	,,	2.3	2.3	***		2.6	2.7	2.8	2.8		30
F.R.J.	01861	17730	17001		15700	15261	14787	14337	13944	13562	13213	12895	12214	12044	11795	11564	11339	11136	10934	1056	10394	10236	10078	62660	09460	09522	09393	09271	0000	08936	.08829	08728	08535	08446	.08355	08269	0.081868	08027	.07949	47870	07731	.07665	16570	16670	0740	07347	.07287	.07229	07179	1000	07011
12 12	100E-0	4006	250F	1406-0	LOOF	630E	400E-0	250E-0	.160E-0	.100E-0	630E-0	400E-0	1405	100E	630E-0	-400E-0	-250E-0	160E-0	1005-0	400F-0	250E-0	.160E-0	100E-0	630E-0	250F-0	160E-0	.100E-0	630E-0	250E-0	160E-0	-100E-0	630E-1	250E-1	160E-1	.100E-1	.630E-1	0.250E-11	.160E-1	-100E-1	.630E-1	250F-1	160E-1	.100E-1	. 6 30 E - I	250F-1	160E-1	-100E-1	.630E	2400F-1	,	

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	PSEUDO	BLE FOR AID	TABLE FOR AIDR EQUALS 0.2200 PSEUDO ERROR RATE EQUALS 1.0 /	0,2200	
PIT FRROR	SIN	SNR	0/4	DERIV PER	TIME
RATE	PATTO	1N 08	RATIO	-	CONSTANT
1006-0		14.24	0.967952	-0-010875	11999
630F-0		14.65	0.952743	0.007520	17353
0.400E-03	0.177282	15.03	0.931818	-0.005609	.23266
250F-0		15.39	0.904962	-0.004745	.27499
0.160F-03		15.71	0.878017	-0.004580	.28491
100F-0		16.03	0.851306	-0.004708	.27716
630F-0		16.33	0.827763	-0.004923	.26509
400E-0		16.60	0.807141	-0.005140	.25388
.250E-0	0.143377	16.87	0.788035	-0.005349	.24397
0.160F-04	0.139446	17.11	0.771632	-0.005530	.23598
0.100F-04	0.135620	17,35	0.755880	-0.005705	.22873
0.630F-05	0,132137	17.58	0.741682	-0.005866	.22247
0.400Fu05	0,128951	17.79	0.728786	-0.006015	.21694
0.250E.05	0.125877	18.00	0.716408	-0.006163	.21174
0,160E-05	0.123146	18.19	0.705453	-0.006298	.20718
0.100F-05	0.120448	18.38	0.694661	-0.006437	20272
0.630F-06	0,117956	18.57	0.684717	.0.006570	.19862
400F.0	0,115647	18.74	0.675519	-0.006697	.19484
0-250F-06	0.113392	18.91	0.556547	-0.006827	.19114
0.160F-06	0,111365	19.07	0.658494	-0.006948	.18782
0.100E-06	0,109341	19.92	0.650461	-0.007073	.18449
0.630F-07	0,107453	19.38	0.642974	-0.007194	.18139
0.400E-07	0,105687	19.52	0.635975	-0.007311	.17848
0.250E-07	0,103946	19.66	0.629083	-0.007431	17561
0.160E.07	0.102369	19.80	0.622842	-0.007542	.17300
0.100E-07	0,100782	19.93	0.616564	-0.007659	.17038
0.630F-08	0.099290	20.06	0.610666	-0.007772	.16790
0.400F-08	0.097885	20.19	0.605114	-0.007881	.16557
0.250F-08	0.096491	0	0.599609	-0.007993	.16325
0.160E-08	0.095220	20.43	0.594591	860800-0-	.16114
0.100E-08	0.093934		0.589513	-0.008207	.15899
-630E-0	.09271	0	0.584715	.0.008313	.15696
-400F-	•09156		0.580173	-0.008416	.15504
0E-0	1906	20.87	0.575646	-0.008522	0.153125
.160F	.08936	0.0	0.571500	-0.008621	.15136
0.100F-09	0	C.	0.567285	-0.008724	.14957

EVELS FOR THE	RATIO. TTO A / D RATIO. HRESHOLD VALUES SIGNAL 4.
THE THORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	* AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. * RMS NISE TO RMS SIGNAL RATIO. * SIGNAL POWER TO NOISE POWER IN DECIBLES. * ADAPTIVE THEFSHOLD AMPLITUDE TO D RATIO. * DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO. * DUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD **LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES **WHEN BITE RATE ** * 12552600. **AND ERROR SIGNAL
# HALF OF THE NORMA	### AMPLITUDE OF INTE ### NOTSE TO RMS ### SIGNAL POTESHOLE ### ADAPTIVE THRESHOLE ### DUASILINEAR TIME ### NOTS FOR SMALL CA ### NOTS FOR SMALL CA ### NOTS FOR SMALL CA
NOMENCLATURE:	AIDR N / S RATIO S / D RATIO DERIV PER WRT TIME CONSTANT

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### PATE RATIO IN DB RATIO 0.630F=10 0.086317 21.38 0.552284 0.250F=10 0.086317 21.38 0.552284 0.250F=10 0.086317 21.38 0.55574 0.100F=10 0.081864 21.47 0.55574 0.250F=11 0.081864 21.47 0.55574 0.250F=11 0.081864 21.47 0.55574 0.100F=11 0.081864 21.47 0.55574 0.100F=11 0.081864 21.47 0.55574 0.100F=12 0.077496 21.49 0.535693 0.400F=12 0.077496 22.09 0.532618 0.400F=12 0.078035 22.15 0.556869 0.400F=12 0.078035 22.15 0.556869 0.400F=12 0.078036 22.45 0.51619 0.400F=13 0.075970 22.45 0.51619 0.400F=13 0.075970 22.45 0.51619 0.400F=14 0.0727292 22.45 0.506913 0.400F=14 0.0727292 22.45 0.502086 0.250F=14 0.071737 22.49 0.502086				
0.087282 0.08676317 0.08676317 0.08676317 0.08676317 0.081868 0.0818687 0.0818887 0.081887 0.0818887 0.0818887 0.0818887 0.0818887 0.0818887 0.0818887 0.0818887 0.0818887 0.0818887 0.0818887 0.0818887 0.0818887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.081887 0.0818	1N 08	RATIO	WRT A / D	CONSTANT
0.084582 21.18 0.08464317 21.38 0.084663 21.47 0.082697 21.65 0.081060 21.65 0.081060 21.65 0.081060 21.65 0.081060 21.65 0.07917 21.69 0.07917 21.69 0.07917 22.99 0.07917 22.99				
0.08555 21.28 0.08555 21.48 0.081556 21.45 0.081669 21.45 0.081040 21.45 0.081040 21.45 0.078749 21.49 0.078749 22.89 0.078749 22.89 0.078749 22.99 0.078749 22.99 0.078740 22.99 0.078740 22.99 0.078740 22.89 0.078740 22.89 0.078740 22.89	21.18	0.563284	-0.008825	0.147870
0.085351 21.38 0.082693 21.47 0.082693 21.65 0.081040 21.34 0.081040 21.34 0.078749 21.33 0.078749 22.08 0.077817 22.33 0.075816 22.33 0.075816 22.45 0.075816 22.45 0.075816 22.45 0.075816 22.45 0.075816 22.45 0.075816 22.45	21.28	0.559480	-0.008922	0.146250
0.083556 21.55 0.081856 21.55 0.081060 21.55 0.081070 21.83 0.07874 21.83 0.07874 21.83 0.07817 22.15 0.07817 22.15 0.07817 22.15 0.07817 22.15 0.07817 22.15 0.07817 22.83 0.07817 22.83 0.07817 22.83 0.07817 22.83 0.07817 22.83 0.07817 22.83 0.07817 22.83 0.07817 22.83	21.38	0.555474	-0.009023	0.144627
0.083556 21.55 0.082697 21.55 0.081040 21.55 0.081040 21.83 0.0810	21.47	0.552174	-0.009117	0.143134
0.082697 21.65 0.081868 21.74 0.080277 21.91 0.078749 27.08 0.078749 27.08 0.077817 27.08 0.075316 27.08 0.075316 27.08 0.075316 27.08 0.075316 27.08 0.075316 27.08 0.075316 27.09 0.075316 27.08 0.075316 27.08 0.075316 27.08 0.075316 27.09 0.075316 27.09 0.075316 27.09 0.075316 27.09 0.075316 27.09 0.075317 27.09 0.075317 27.09 0.075317 27.09 0.075317 27.09	21.56	0.548403	-0.009215	0.141609
0.081868 21.74 0.081040 21.83 0.079496 21.89 0.079496 21.99 0.07817 22.39 0.077817 22.39 0.075816 22.89 0.075816 22.89 0.075816 22.89 0.075816 22.89 0.075816 22.89 0.075816 22.89	21.65	0.545201	-0.009310	0.140156
0.081040 21.83 0.080277 21.91 0.078749 27.08 0.07817 27.15 0.077817 27.15 0.077817 27.33 0.075970 22.33 0.075970 22.34 0.075970 22.46 0.075970 22.46 0.075970 22.46 0.075970 22.46	21.74	0.541956	*0*600*0*	0.138768
0.090277 21.91 0.079496 21.99 0.078035 22.08 0.077317 27.23 0.077317 27.23 0.077316 22.45 0.075316 22.45 0.075316 22.45 0.075316 22.45 0.075317 22.43 0.075317 22.43 0.075317 22.43	21.83	0.538698	-0.009499	0.137374
0.079496 21.99 0.078749 22.08 0.077817 22.25 0.075816 22.45 0.075816 22.45 0.075816 22.45 0.075816 22.45 0.075816 22.45 0.075816 22.45 0.078816 22.45 0.078817 22.45 0.078817 22.45 0.078817 22.45 0.078817 22.45 0.078817 22.45	21.91	0.535693	-0.009589	0.136088
0.078749 27.08 0.077317 27.08 0.077317 27.37 0.075970 22.33 0.075970 22.39 0.075970 22.39 0.075970 22.54 0.077877 22.54 0.077877 22.54 0.077737 22.89	21.99	0.532618	-0.009682	0.134771
0.074035 22.15 0.074317 22.33 0.075970 22.31 0.075916 22.46 0.074658 22.61 0.072872 22.68 0.072872 22.68 0.072872 22.68 0.072872 22.68	22.08	0.529679	-0.009774	0.133512
0.077317 27.23 0.075652 22.31 0.075316 22.45 0.075316 22.45 0.075317 22.61 0.072472 22.61 0.072877 22.48 0.07287 22.48 0.071737 22.48	22.15	0.526869	-0.009863	0.132307
0.075652 22.31 0.075316 22.46 0.074690 22.53 0.074058 22.51 0.073472 22.58 0.073472 22.58 0.07292 22.88	27.73	0.524040	-0.009954	0,131093
0.075970 22.39 0 0.074690 22.46 0 0.074696 22.63 0 0.073472 22.68 0 0.072870 22.75 0 0.072870 22.45 0	22,31	0.521424	-0.010040	0.129971
0.075316 22.65 0.074690 22.63 0.073472 22.68 0.072870 22.78 0.07287 22.88 0.071737 22.89 0.071737 22.89	22.39	0.518739	-0.010130	0.128819
0.074690 22.53 0 0.074058 22.61 0 0.072472 22.68 0 0.072870 22.75 0 0.071737 22.89 0 0.071737 22.89 0	22.46	0.516169	-0.010217	0.127715
0.074058 22.61 0 0.073472 22.68 0 0.073472 22.68 0 0.072292 22.82 0 0.071737 22.89 0 0.071737 22.89 0	22.53	0.513704	•0.010303	0.126656
0.073472 22.68 0 0.072870 22.75 0 0.072892 22.82 0 0.071737 22.89 0 0.071176 22.95 0	22.61	0.511217	-0.010390	0.125588
0.072870 22.75 0 0.072292 22.82 0 0.071137 22.89 0 0.071176 22.95 0	22.48	0.508913	-0.010473	0.124598
0.072292 22.82 0 0.071737 22.89 0 0.071176 22.95 0	22.75	0.506544	-0.010559	0.123579
0.071737 22.89 0	22.82	0.504270	-0.010643	0.122602
0.071176 22.95	22.89	0.502086	-0.010726	0.121662
0.070655 23.02	22.95	0.499878	-0.010810	0.120713
	23.02	0.497829	-0.010890	0,119831
0.070118 23.08	23.08	0.495718	-0.010973	0.118922

# MALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	THE THREE LEVEL EYE I.E., DECISION LEVEL. # AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. # RMS. NOISE TO RMS. SIGNAL DATIO.	NOISE POWER IN DECIBLES.	CONSTANT OF THE ADADTIVE THRESHID.	LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600, AND ERROR SIGNAL DIVIDER PATIO INTO D/A CONVERTER #
- HALF OF THE NORMA	# AMPLITUDE OF INTE	SIGNAL POWER TO	* DERIVATIVE OF PSE	LOOP FOR SMALL CHAMEN BITE RATE #
NOMENCLATURE:	ATDR ATTO	SAR SATTO	DERIV PER WRT	

Colored Colo	-300	. 18964	4.	.96838	0.01102	.11837
15.00 1.00	30E-0	17264		95346	0.00763	11094
10 10 10 10 10 10 10 10	0	16577		99966	0.00482	27046
Coloniary Colo	0-30	15965	.0	88030	0.00466	28004
Colored Colo	0E-0	.15383	5.2	.85422	0.00479	.27225
Colored Colo	0E-0	.14864	5.5	.83128	0.00501	25092
Colored Colo	000	14400	8.	81121	0.00523	24908
Colored Colo	00	13676		774.91	0000	23130
126626 17.881 0.747649 0.005989 0.227787 0.125529 0.225219 0.	OE-O	13202	2	76142	0.00582	22409
10 125519 18,03 0,735142 0,006144 0,20723 0,112523 18,24 0,725138 0,106144 0,20723 0,112524 0,117233 18,42 0,72547 0,006581 0,10621	0E-0	.12862	8.	74764	0.00598	21787
Colone C	0-30	12551	0.6	.73514	0.00614	.21238
18,43 0.712514 9,0006438 0.202707 0.006510 0.102671 0.106500 0.112557 0.006500 0.002647 0.006510 0.102670 0.102557 0.006500 0.002647 0.006510 0.102557 0.006500 0.002641 0.106500 0.102557 0.006500 0.002641 0.002641 0.106500 0.106510	0-3U	.12252	3.2	.72313	0.00629	.20722
Colone C	0E-0	.11986	4.	.71251	0.00643	.20270
Colored Colo	0E-0	.11723	9.6	.70204	0.00658	.19827
Colone C	0-30	.11480	8.8	.69240	0.00671	12761
	0E-0	.11255	6.0	.68347	0.00685	.19046
Colorador Colo	0E-0	11036	-	.67477	86900	.18680
New York	000	10838	.3	96999	0.00711	.18352
Colon Colo	0E-0	19901	4.	.65916	0.00724	.18023
Name	0E-0	10458	9.6	.65189	0.00736	117717
Colon Colo	0E-0	10286	1.6	60549	0.00748	.17429
Colorador Colo	0-30	10116	6	.63840	0.00761	17146
Control Cont	DE 0	69660	0	63234	2440000	16889
Colored Colo	0000	80860		47074	*8100°0	16630
Colon Colo	000	09663		66051	96400	16387
Colon Colo	200	97660		11219	10800	16157
Color Colo	0	16660		91609	0.00819	67661.
Control Cont	100	00160	0.0	50005	05800	12761
Color Colo	0 6 9	0903	8	59528	0.00852	18311
Colone C	DE-0	08911	1.0	59086	0.00862	15122
06.09 0.086977 21.21 0.584425 0.0003840 0.14761 0.086978 21.32 0.57431 0.0008978 0.14586 0.086978 21.32 0.57431 0.0008978 0.14586 0.086978 21.32 0.577431 0.0008978 0.14586 0.086978 21.51 0.057730 0.0009151 0.14586 0.086210 0.084008 21.51 0.577730 0.0009151 0.14586 0.084008 21.51 0.577730 0.0009151 0.14560 0.081321 21.80 0.560143 0.0009351 0.13955 0.13955 0.0008132 1.2787 0.078813 22.89 0.558813 0.0009744 0.13351 0.0778130 22.34 0.558813 0.0009744 0.13351 0.0778130 22.34 0.558813 0.0009744 0.13351 0.0778130 22.34 0.558813 0.0009744 0.13351 0.0778130 22.34 0.558813 0.0009744 0.13351 0.0778130 22.34 0.558813 0.0009744 0.13351 0.0778130 22.34 0.558813 0.0009744 0.13351 0.0778130 22.34 0.558818 0.0010813 0.13135 0.0778130 22.34 0.558828 0.0010813 0.125843 0.0778378 22.87 0.558628 0.0010819 0.125843 0.0778378 22.84 0.528762 0.0010819 0.125843 0.0778378 22.84 0.528762 0.0010819 0.125843 0.0778378 22.84 0.528762 0.0010819 0.125843 0.0778378 22.84 0.528764 0.0010819 0.125843 0.0778378 22.84 0.528762 0.0010819 0.125843 0.0778378 22.84 0.528762 0.0010819 0.125843 0.0778378 22.84 0.528762 0.0010819 0.127843 0.0778378 22.84 0.528762 0.0010819 0.11778 0.	0-30	.08800	-	. 58645	0.00873	.14934
Colon Colo	0E-0	.08697	1.2	.58242	0.00384	.14761
06-10 0.084948 21-42 0.574431 =0.009090 0.14419 06-10 0.083068 21-51 0.570730 =0.009151 0.144260 0 0.083068 21-51 0.570730 =0.009151 0.144260 0 0.083203 21-70 0.56019 =0.009452 0.13955 0 0.081321 21-80 0.56019 =0.009452 0.13955 0 0.079678 21-97 0.556873 =0.009466 0.13557 0 0.079678 22-86 0.556870 =0.00946 0.13557 0 0.0778130 22-87 0.556870 =0.009933 0.13136 0 0.0778130 22-87 0.556870 =0.009933 0.13136 0 0.0778130 22-87 0.586870 =0.010027 0.13139 0 0.075948 22-87 0.586870 =0.010027 0.13139 0 0.075948 22-87 0.586870 =0.010021 0.12557 0 0.075938 22-87 0.586870 =0.010311 0.12557 0 0.075938 22-87 0.52656 =0.01031 0.125747 0 0.075977 22-87 0.52656 =0.01031 0.125747 0 0.075977 22-87 0.52656 =0.010930 0.125757 0 0.073938 22-87 0.52656 =0.010930 0.125757 0 0.073978 22-87 0.52656 =0.010930 0.121747 0 0.076978 23-87 0.551888 =0.010930 0.121747 0 0.079578 23-87 0.551888 =0.010930 0.115757 0 0.079978 23-87 0.551888 0.0010930 0.11677	OE 30	.08593	1.3	.57832	,6800.0	.14586
0.083068	0E-1	.08494	4	.57443	5060000	.14419
Control Cont	0.5.	08400		57073	0.00915	14260
Colored Color Co	1	90680		20105	0.00925	14101
Control Cont	1	02280		.56361	0.00935	13955
Continue		04040		*1000	6660000	53861
Continue	1	07047		56367	440000	12527
NE-11 0.078130 22.14 0.547575 0.009837 0.13265 NE-12 0.077370 22.23 0.54580 0.009833 0.131136 NE-12 0.07544 22.34 0.541719 0.131136 NE-12 0.07549 22.47 0.53628 0.0100213 0.12777 NE-12 0.07549 22.47 0.53628 0.010213 0.12754 NE-12 0.073938 22.47 0.53628 0.010314 0.12559 NE-13 0.073938 22.70 0.528562 0.010344 0.12559 NE-13 0.072697 22.37 0.528562 0.010534 0.125547 NE-13 0.072697 22.84 0.528562 0.010571 0.125547 NE-13 0.07081 22.84 0.521496 0.010571 0.12239 NE-14 0.07081 22.98 0.519188 0.010935 0.112539 NE-14 0.07081 23.15 0.51649 0.010935 0.112549 NE-14 0.06918	OF	07887	2.0	55050	4400000	13391
0.077370	OF.	.07813	2.1	.54757	0.00983	13265
Control Cont	0E-1	.07737	2.2	.54458	0.00993	.13136
Control Cont	1-30	.07664	2.3	.54171	0.01002	.13013
Control Cont	3	.07594	2.3	.53898	0.01011	. 12895
Colon Colo	05-1	2610	*	53622	0.01021	1277
DE-12 0.073938 2.2.70 0.531066 0.010396 0.1255556 0.073302 2.2.77 0.528562 0.010364 0.12525556 0.073269 0.072595 0.125259 0.072692 2.2.77 0.528562 0.010651 0.12349 0.072507 2.2.84 0.521340 0.0010651 0.122349 0.071507 2.2.98 0.521496 0.0100746 0.121422349 0.071507 2.2.98 0.519488 0.0100735 0.121427 0.519488 0.010972 0.1121427 0.070358 2.3.05 0.516493 0.011075 0.11575 0.11575 0.11675 0.011075 0.11775 0.11675	1	099/0		.53368	0.01030	12667
NE_13 0.072692 22.77 0.526162 0.010571 0.123430 NE_13 0.072692 22.84 0.523440 0.010661 0.123430 NE_13 0.070921 22.98 0.519188 0.010835 0.12142 NE_14 0.070358 23.05 0.516973 0.01093 0.1119470 NE_14 0.069818 23.12 0.516846 0.011093 0.111630 NE_14 0.069765 23.25 0.510699 0.011075 0.11677	1	07330	10	53106	0.01039	12255
NE_13	1	017760		K2414		1 2 3 4 3
NE-13 0.071507 22.91 0.521496 -0.010746 0.12142 NE-13 0.070921 22.98 0.519188 -0.010835 0.12142 NE-14 0.070358 23.05 0.516473 -0.010835 0.11047 NE-14 0.06918 23.15 0.516496 -0.011076 0.11163 NE-14 0.068765 23.25 0.510699 -0.011775 0.11673	DE.	07207		57374	4010	12230
NE-13 0.070921 22.98 0.519188 0.010835 0.12043. NE-14 0.070358 23.05 0.516873 0.010922 0.11947. NE-14 0.06918 23.19 0.512695 0.011093 0.11753. NE-14 0.068765 23.25 0.510699 0.011175 0.11677.	DE-1	07150	5	52149	0.01074	12142
CE-14 0.070358 23.05 0.516973 .0.010922 0.11947 CE-14 0.069818 23.12 0.514846 .0.011006 0.11856 CE-14 0.06972 23.19 0.512695 .0.011093 0.11753 CE-14 0.068765 23.25 0.510699 .0.01175 0.11677	OE-1	.07092	5.9	51918	0.01083	12043
0E-14 0.069818 23.12 0.514846 0.011006 0.11856. 0E-14 0.069272 23.19 0.512695 0.011093 0.11763. 0E-14 0.068765 23.25 0.510699 0.011175 0.11677.	1-30	.07035	3.0	.51697	0.01092	.11947
0.069272 23.19 0.512695 .0.011093 0.11763	1-30	.06981	3.1	.51484	0.01100	.11856
0E-14 0.068765 23.25 0.510699 .0.011175 0.11677	S.	.06927	3.1	.51269	0.01109	.11763
	9	.06876	3.5	.51069	0.01117	.11677

TABLES
MONITOR
PATTERN
FYF
BASFBAND
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TABLE FOR AIDR EQUALS 0.2400 PSEUDO ERROR RATE EQUALS 1.0 / 2800.

NOMENCLATURE:

THE THEFELINGE E., DECISION LEVEL.

AIDR

A MADITUDE OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE AIDR

A / S RATIO = AMPLITUDE OF INTREVIBLE ATTO.

S NR = SIGNAL RATIO.

S IGNAL POWER TO NOISE POWER IN DECIBLES.

A / D RATIO. = ADAPTIVE THRESHOLD AMPLITUDE TO NATIO.

DERIV PER WRT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.

TIME CONSTANT = QUASILINEAR TIME COMSTANT OF THE ADAPTIVE THRESHOLD LOND FOR SHALL CHAMGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER =

BASEBAND FYE PATTERN MONITOR TABLES

TABLE FOR AIDE EDUALS 0.2400 PSEUDN ERROR RATE EQUALS 1.0 / 2800.

CONSTANT	11122 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	0.113888
DERIV PER	0009050 0009051 00009051	0071100/1-
RATIO	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3+00nc*n
SAR IN DB	20000000000000000000000000000000000000	
RATTO	00000000000000000000000000000000000000	3-3666
RIT ERROR	00000000000000000000000000000000000000	

NOMENCLATURE:

HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THREE LEVEL EYE I.E., DECISION LEVEL.

THE THREE LEVEL EYE I.E., DECISION LEVEL.

A MAN SIGNAL PATIO.

SANS SIGNAL POWER IN DECIBLES.

SANS SIGNAL POWER TO NOISE DOWER IN DECIBLES.

A MAN DEATIO.

SAND RATIO.

A A DEATIO.

A A DE

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	11001	10 74	22413	87692	26417	01007	26341	23399	22614	21901	.21286	.20744	20233	19787	16861	00681	10201	17897	17574	17273	16691	16713	10401	15040	15764	15521	15317	15111	14916	14731	14641	0.143790	14044	13889	.13734	13591	13445	13306	13041	12918	.12792	.12672	12558	74471	17225	12120	12019	.1191A	.11824	11727	11634	11544	*****	11284	
	021120	0.00777	000000	1690000	0.00475	68400	00525	000557	5.00577	0.00595	0.00613	0.00629	7.00644	0.00659	200000	0.00000	20.00	00720	000742	0.00755	0.00768	09200	2620000	000000	00000	0.00840	0.00851	0,00863	0.00874	2690000	7680000	0.009075	0.00000	0.00939	05600 0	0960000	0.600.0	08600-0	01000	0.01010	0.01020	0.01029	0.01039	801000	0.01047	0.01076	0.01085	0.01094	0.01103	0.01112	0.01121	0.01130	0.01199	10.00	9611090
LE WAS	06896	95430	93425	90826	68289	69743	91550	79756	78209	.76726	.75389	.74176	73011	11980	70964	87001	20169	47557	66800	\$6099	.65433	64783	64193	00000	62518	61998	61523	.61043	68509	60160	59731	0.593390	58561	58200	.57840	57508	57170	.56848	56232	55947	.55655	.55377	55110	74846	54340	54096	53862	.53627	.53408	.53183	.52968	.52761	16676	62637	16136
-								7.3	7.5	7.8	0.0	8.2	4.	9		,	,,		. 6	8.	0.0	-	7.0			-	0.0	1.0	=	7.5	•	21.56	1.6	1.7	1.8	6.0		2.0	2.3	2.3	2.4	2.5	9,0	,,	2.8	2.9	3.0	3.0	3.1	3.2		6.4			:
PRINT	24.4	11,612	10841	04101	46661	60641	14008	13579	13205	.12840	12509	12207	11915	11656	11401	1000	10732	10540	10349	.10170	.10003	.09838	68960	70500	09264	09132	.09012	06880	.08775	08666		0.083571	08261	.08169	.08078	.07994	80610	07870	07670	.07598	.07524	.07453	01383	07254	07190	.07128	.07069	00000	*06954	.06897	.06842	06789	06190	2000	
15 14 DE	2000	0-2060.	2000	0-3057.	0-3001	2001	4006-0	-250E-	-160E-0	.100E-0	C-30E9.	-400E-0	-250E-0	160E-0	1005-0	0 3000	250F	160E-0	100E-0	0-30E9.	0-300+	-2052	1000	A 30E	400F	250E-0	.160E-0	.100E-0	.630E-0	0-3004-0	- 20C7	0-1005-09	.630E-1	.400E-1	.250F-1	.160E-1	1000	400F	250E-1	.160E-1	.100E-1	.630E-1	-400E-1	1.2002	1006	630E-1	1-3005	.250E-1	.160E-1	-100E-1	.630E	400E	20620	100	• 100

TABLES
110R
MON
PATTERN
FYE
BASEBAND
8

RIT FRROR	S / N	SNR	0 / V	PE	TIME
RATE	RATTO	1N 08	RATTO	WAT A / D	CONSTANT
7	0.184986	14.66	٠,	01120	-
0.630E-03	0.176151	15.08		0.007770	
	0.168473	15.47	5	.00580	
.250F-03	0.161407	15.84	٠.	6400	
	0.155399	16.17	0.882851	.0047	0.274522
.100F.03	0.149697	16.50	۳.	-0.004893	
0.630F.04	-	16.79	۳.		
*400F-04		17.07	٠.	36800	
.250E-04	7	17,34	٦.	00557	
.160F-04	0.132050	17.59			0.226148
.100F-04	0,128409	17,83	۲.	.00595	0.219019
.630F-05	0.125099	18.05	٠.	0061	0.212866
\$00F-05	0.122074	18.27	٠.	.00629	0.207441
.250E-05	0,119157	18.48	-	99900	0.202337
.160E-05	0,116567	18.67		65900	0.197875
.100F-05	0.114010	18.86	.709647	-0.006743	0.193512
.630E-06	0,111669	0.6	.700284	.00688	0.189509
0.400E-06	0,109462	19,21	.691621	-0.007023	0.185814
.250F-06	0,107326	19,39	.683168	-0.007161	0,182212
.160E-06	0.105407	19.54	.675578	-0.007291	0.178978
0.100E-06	0,103490	19.70	*00899	-0.007425	0.175749
.630F-07	0.101703	19,85	.660941	-0.007554	0.172737
0.400E-07	0.100031	20.00	•	-0.007680	0.169918
.250E-07	0.098383	20,14		00780	0,167138
-160E-07	0.096890	20.27	•	.00792	0.164618
	0.095388	20.41		.00805	0.162081
	•	20.54	•	.00817	0.159694
	•	20,66	•	.00828	0.157446
.250F-08	. •	20.79	•	•	0.155214
.160F-0	0	20.90		0.00851	0.153177
.100F.0	•	21,02		0.00863	0,151116
0.630E-09	0.087755	21,13		-0.008748	0.149166
-400F-09	0.086665	21.24	•	00885	0.147319
.250F-0	۰.	21,35	0.597315	.00897	0.145477
0.160F-09	C	21.45	•	-0.000015	0.143790
.100F-0	0	21.56		0.00918	0.142073
				-	

* HALF OF THE NORMAL DISTANCE RETWEEN DATA LEVELS FOR THE THE THREE LEVEL EVE I.E., DECISION LEVEL. * AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. * RAS NOISE TO RMS SIGNAL RATIO. * SIGNAL DAWRE TO NOISE POWER IN DECIBLES. * ADADTIVE THRESHOLD AMPLITUDE TO D RATIO. * DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D PATIO. * QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STRADY STATE VALUES.	
THE THE LEVEL EYE I.E., DECISION LEVELS FOR THE THREE LEVEL EYE I.E., DECISION LEVEL. AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. RMS NOISE TO RMS SIGMAL RATIO. SIGMAL POWER TO NOISE POWER IN DECIBLES. ADADTIVE THRESHOLD AMPLITUDE TO P RATIO. DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / GOUSTLINEAR TIME CONSTANT OF THE ADADTIVE THRESHOLD GUASILINEAR TIME CONSTANT OF THE ADADTIVE THRESHOLD	
	WHEN RITE RATE = 12592600. AND ERROR SIGNAL DIVIDER RATIO INTO DIA CONVERTER =
ATDR ATDR N S RATIO SNR A / D RATIO DERIV PER WRT	

BASEBAND FYF PATTERN MONITOR TABLES

81T FROR RATE 0.630F-10 0.400F-10		any			
0.630F-10 0.400F-10	S / N		0 / 1	DERTV PER	TIME
0.630F-10 0.400F-10	KATIO	80 N	MATIO		CONSTANT
0.400F-10	0,082611	21.66	0.585611	-0.009291	0.140443
O 250E-10	0.081697	21.76	0.582009	-0.009395	0.138892
200	0.080783	21.85	0.578404	-0.009501	0.137340
0.160F-10	0.079942	21.94	0.575089	-0.009601	0.135913
0.100F-10	0.079084	52.04	0.571706	-0.009705	0.134456
0.630E-11	0.078266	22.13	0.568483	-0.009606	0.133067
0.400E-11	0.077486	22.22	0.565408	-0.009905	0.131743
0.2506-11	0.076703	22.30	0.562321	-0.0:000	0.130412
0.160F-11	0.075980	22.39	0.559473	-0.010101	0.129185
0.100E-11	0.075241	22.47	0.556558	-0.010200	0.127929
0.630E-12	0.074534	22.55	0.553773	-0.010297	0.126729
0.400F-12	0.073859	22.63	0.551109	-0.010391	0.125580
0.250F-12	0.073178	22.71	0.548427	-0.010488	0.124424
0,160F-12	0.072549	22.79	0.545947	-0.010578	0,123355
0.100F-12	0.071903	22.87	0.543402	-0.010673	0,122258
0.630F-13	0.071285	22.94	0.540965	-0.010766	0.121207
0.400F-13	0.070692	23.01	0.538628	-0.010856	0,120199
0.250F-13	0.070094	23.09	0.536270	-0.010949	0.119182
0.160E-13	0,069540	23.16	0.534085	-0.011036	0,118240
0.100E-13	0.068970	23.23	0.531838	-0.011127	0.117271
0.630F-14	0.068423	23.30	0.529687	-0.011216	0,116341
0.400E-14	0.067897	23,36	0.527611	-0.011303	0.115448
0.250F-14	0.067364	23.43	0.525517	-0.011392	0.114545
0-160F-14	0.066873	23.50	0.523574	-0.011476	0.113707
0.100F-14	0.066365	23.56	0.521571	-0.011564	0.112843

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	* HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FC	THE THREE LEVEL EYE I.E. DECISION LEVEL.	- AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATTO.	. RMS NOISE TO RMS SIGNAL RATIO.	E SIGNAL POWER TO NOISE POWER IN DECIBLES.	- NAPTIVE THRESHOLD AMPLITUDE TO D RATIO.			LOOP FOR SMAIL CHANGES AROUND STEADY STATE VALUES	WHEN BITE RATE . 12552600. AND ERROR SIGNAL	DIVIDER RATIO INTO D/A CONVERTER . 4.
NIMENCLATURE.				RATTO		A / D RATIO	DERIV PER WRT	TIME CONSTANT			
MALIN	0		ATDR	N / S RATTO	SMR	AID	DERIV	TIME C			

0.100E-09 0.111499 15.77 0.095542 0.005931 0.164954 0.2050E-03 0.114499 15.77 0.0950E-03 0.114499 16.77 0.0950E-03 0.114499 16.77 0.0950E-03 0.114499 16.77 0.0950E-03 0.114499 16.77 0.0950E-03 0.114499 17.77 0.0950E-04 0.114499 17.77 0.0950E-04 0.0950E-04 0.114499 17.77 0.0950E-04 0.014499 17.77 0.0950E-04 0.014499 17.77 0.0950E-04 0.0050E-04 0.	A 20F-0					
100 100			:	95524	0.00793	16455
Colored Colo	2506	18404		1000	00000	28083
100 100	160E-0	15108		88560	0.00484	26842
100 100	100E-0	14551	1.9	. 86087	0.00000	26062
### 17.37 0.882701	0-30E9.	14051	0.	.63916	0.00524	.24884
The color The	4006-0	13614		.82021	0.00548	.23796
Control Cont	2007	13196		01208.	0.0001	22043
100 100	LONE	12478	0	77329	0.00610	21361
### 1985 18.72 0.74851 0.006617 0.1972	630E-0	12156	6.3	76032	0.00628	20755
1976 1978 18.73 19.72 19.006619 0.1972 19.006606 0.1972 19.006606 0.1972	400E-0	.11862	6.9	74855	0.00645	.2021
100 100	-250E-0	11578	1.	.73724	0.00661	.19720
100E	1505-0	11326	6.0	72723	0.00676	19281
100 100	4306	1001		7007	2690000	18453
250E_06 0.102427 19.44 0.691683 0.007487 0.174281 0.007687 0.174281 0.007789 0.007887 0.174281 0.007789 0.007887 0.174281 0.007789 0.007887 0.174281 0.007789 0.007887 0.174281 0.007789 0.007887 0.174281 0.007789 0.007887 0.174281 0.007887 0.174281 0.007887 0.007887 0.174281 0.007887 0.007887 0.007887 0.007887 0.007878 0.007887 0.00788	4006	10636		98669	0.00721	18098
100E_06	250E-0	10428		69169	0.00735	17745
0.00 0.00	.160E-0	10242	4.1	.68427	0.00748	17428
6490E_07 0.099823 20.10 0.645094 =0.000789 0.16818 6400E_07 0.095939 20.25 0.645836 =0.000883 0.168542 100E_07 0.095939 20.25 0.645818 =0.000813 0.168542 6400E_08 0.091315 20.91 0.63539 =0.0008271 0.16724 6400E_08 0.091315 20.91 0.635397 =0.008271 0.15748 6400E_08 0.091315 20.91 0.635397 =0.008315 0.15743 1000E_08 0.091315 20.91 0.625625 =0.008873 0.14704 1000E_08 0.091315 21.27 0.62991 =0.009319 0.145104 1000E_08 0.091311 21.27 0.62991 =0.009317 0.14704 1000E_09 0.091319 21.27 0.62991 =0.009317 0.14704 1000E_09 0.091319 21.27 0.62991 =0.009314 0.14704 1000E_09 0.091319 21.27 0.609311 =0.009314 0.145104 1000E_09 0.091319 21.27 0.609314 0.145104 1000T_09 0.091319 22.29 0.58378 =0.009314 0.13812 1000E_10 0.074531 22.29 0.58378 =0.009314 0.12819 1000E_11 0.077522 22.29 0.569314 =0.009314 0.12819 1000E_12 0.077522 22.29 0.569314 =0.009314 0.12819 1000E_12 0.077531 22.29 0.569314 =0.009314 0.12819 1000E_12 0.077523 22.29 0.569314 =0.009314 0.12819 1000E_13 0.077523 22.29 0.569314 =0.009314 0.12819 1000E_13 0.077523 22.29 0.569314 =0.009314 0.1189 1000E_13 0.069314 22.24 0.569314 =0.0010313 0.1189 1000E_13 0.069314 22.24 0.569314 =0.0010313 0.1189 1000E_13 0.066497 22.24 0.569314 =0.0010314 0.1189 1000E_13 0.066497 22.24 0.569314 =0.0011314 0.1189 1000E_14 0.066975 22.24 0.569314 =0.0011314 0.1189 1000E_14 0.066975 22.24 0.569314 =0.0011314 0.1189 1000E_14 0.066975 22.24 0.569314 =0.0011314 0.1189 1000E_14 0.066977 22.24 0.569314 =0.0011314 0.1189 1000E_14 0.066977 22.24 0.0011314 0.0011319	.100E-0	.10056	6.6	.67691	0.00762	17112
### ### ### ### ### ### ### ### ### ##	0-30E9	.09882		.67005	0.00775	.16818
Continue	4005-0	.09719	2.0	.66363	0.00788	16542
0.00	1406	46660		167791	20800-0	14024
\$306=08 0.091315 20.79 0.645640 0.008395 0.15543	1005-0	09268		64581	0.000	15776
\$\text{600E}_{\text{00}}\$ 0.090022 \$\text{20}_{\text{00}}\$ 0.090022 \$\text{20}_{\text{00}}\$ 0.090022 \$\text{20}_{\text{00}}\$ 0.090022 \$\text{20}_{\text{00}}\$ 0.090022 \$\text{20}_{\text{00}}\$ 0.087292 \$\text{20}_{\text{00}}\$ 0.097292 \$\text{20}_{\text{00}}\$ 0.097294 \$\text{20}_{\text{00}}\$ 0.097292 \$\text{20}_{\text{00}}\$ 0.09729	630E-0	09131	1	04049	0.00830	15543
250E_08 0.088740 21.04 0.630236 0.008438 0.15106 630E_08 0.0887872 21.15 0.625622 0.008783 0.14507 630E_09 0.088210 21.38 0.616536 0.008989 0.14516 6400E_09 0.088211 22.49 0.612356 0.009217 0.14157 6400E_09 0.082186 22.40 0.605372 0.009217 0.14157 6400E_09 0.082186 22.40 0.605372 0.009249 0.14157 6400E_09 0.081203 22.40 0.605372 0.009249 0.13825 6400E_09 0.081203 22.40 0.693371 0.009489 0.13825 6400E_10 0.076495 22.10 0.589391 0.009548 0.13825 6400E_10 0.076495 22.10 0.589391 0.009548 0.13825 6400E_11 0.077698 22.10 0.589391 0.009548 0.13825 6400E_11 0.077698 22.10 0.589391 0.009548 0.13825 6400E_11 0.077698 22.10 0.589391 0.009548 0.13866 6400E_11 0.077698 22.10 0.589391 0.009397 6400E_11 0.077699 22.24 0.589391 0.009397 6400E_11 0.07799 0.12819 6400E_12 0.009867 22.10 0.566391 0.0010391 0.12819 6400E_12 0.009867 22.10 0.566391 0.0010391 0.12819 6400E_13 0.006987 22.10 0.566391 0.0010391 0.1189 6400E_13 0.006987 22.24 0.551097 0.011138 0.1189 6400E_13 0.066997 22.24 0.551097 0.011138 0.1189 6400E_13 0.066997 22.24 0.551097 0.011139 6500E_14 0.066997 22.24 0.551097 0.011139 6500E_14 0.066997 22.27 0.538341 0.001134 0.111063	400E-0	.09002		63529	0.00051	15324
100E_08	.250E-0	.08874	0.1	.63023	0.00863	.15106
400E=09 0.084211 21.49 0.61536 0.008873 0.14516 400E=09 0.084211 21.49 0.615356 0.009873 0.14516 400E=09 0.084211 21.49 0.615356 0.009873 0.14516 400E=09 0.081208 21.81 0.606472 0.009320 0.18336 400E=09 0.081208 21.81 0.606492 0.009934 0.13852 4100E=09 0.081208 21.81 0.896805 0.009948 0.13852 4100E=10 0.078484 22.20 0.898784 0.009948 0.13858 4100E=10 0.078844 22.29 0.888778 0.009944 0.13828 4100E=11 0.077884 22.29 0.888778 0.009944 0.13828 4100E=11 0.077884 22.29 0.888778 0.009944 0.13828 4100E=11 0.0778292 22.47 0.898784 0.009944 0.13828 4100E=11 0.077887 22.29 0.888778 0.009974 0.13889 4100E=11 0.077887 22.80 0.888778 0.010283 0.12889 4100E=12 0.077824 22.80 0.868841 0.010381 0.12879 4100E=12 0.077847 22.80 0.858811 0.010381 0.12879 4100E=12 0.077895 22.80 0.858811 0.010381 0.12879 4100E=13 0.069867 22.80 0.85881 0.010381 0.12879 4100E=13 0.069867 22.80 0.85881 0.010383 0.11898 4100E=13 0.069877 22.80 0.85881 0.01188 0.11898 4100E=13 0.068891 22.86 0.85881 0.01188 0.11898 4100E=13 0.068977 22.80 0.898874 0.011898 0.11898 4100E=14 0.068977 22.80 0.898874 0.011898 0.11898	160E-0	.08757	Ξ.	.62562	0.00875	14907
250E_09 0.084211 2.49 0.605186 0.000310 0.44336 0.000E_09 0.008218 21.60 0.606497 0.0003217 0.141376 0.000E_09 0.000218 21.60 0.606497 0.000332 0.131823 0.000211 0.00011 0.000211 0.000211 0.00011 0.000211 0.000211 0.00011 0.00021 0.00021 0.00011 0.00021 0.00021 0.00011 0.00021 0.00011 0.00022 0.0002	430F-0	08638	7.6	61463	0.00887	14506
250E_09 0.082188 21_60 0.606189 0.009217 0.14157 160E_09 0.082188 21_70 0.606497 0.009217 0.14157 530E_10 0.082218 21_91 0.596805 0.009548 0.13954 250E_10 0.076495 22_01 0.593301 0.009548 0.13954 250E_10 0.0778495 22_10 0.593301 0.009764 0.13954 250E_10 0.0778495 22_19 0.586794 0.009764 0.13264 250E_11 0.077829 22_29 0.586794 0.009764 0.13264 250E_11 0.077829 22_47 0.587781 0.009764 0.13289 250E_11 0.077829 22_47 0.597781 0.009764 0.12289 250E_11 0.077829 22_47 0.597781 0.00078 250E_11 0.077829 22_64 0.568378 0.00078 250E_12 0.077829 22_64 0.577181 0.2010283 0.12289 250E_12 0.077829 22_64 0.577181 0.2010283 0.12289 250E_12 0.077829 22_64 0.56832 0.010283 0.12289 250E_12 0.0771767 22_88 0.56832 0.010582 0.12289 250E_12 0.077190 22_88 0.56832 0.010582 0.11793 250E_13 0.06867 22_11 0.555782 0.010583 0.11793 250E_13 0.067971 22_48 0.556491 0.011283 0.118319 250E_14 0.065778 22_88 0.56293 0.011283 0.118319 250E_14 0.065778 22_88 0.56293 0.011283 0.111733 250E_14 0.065778 22_88 0.5838450 0.011283 0.111733	400E-0	08421		61235	0.00000	14336
	.250E-0	.08315	1.6	.60818	0.00921	14157
100F=09 0.081205 21.81 0.600490 0.000948 0.13825 0.900F=00 0.000271 21.91 0.596805 0.000948 0.13865 0.13865 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.000948 0.13865 0.13865 0.13865 0.13865 0.13865 0.000948 0.13865 0.0011795 0.1386	.160E-0	.08218		.60437	0.00332	.13992
5.50	100E-0	08120		69009	0.00943	13825
### 100 0.07938	.630E-1	.08027	6.1	.59680	7560000	.13666
Control Cont	-400E-1	•07938	2.0	. 59330	0.00965	13515
### 1000	140E-1	07747		61686	9460000	13364
### ### ##############################	100E-1	.07684	2.2	58327	0.00997	13083
4.00E_11 0.075292 22.47 0.577151 =0.010179 0.12819 2.556_11 0.0774531 22.55 0.574147 =0.010283 1.00E_11 0.0774531 22.55 0.574147 =0.010283 1.00E_11 0.077453 22.72 0.568541 =0.010583 0.12689 2.50E_12 0.077224 22.80 0.568541 =0.010583 0.12447 2.50E_12 0.077767 22.80 0.568532 =0.010583 0.12447 2.50E_12 0.077767 22.80 0.568532 =0.010583 0.12719 2.50E_12 0.070495 22.04 0.56817 =0.010672 0.12199 2.00E_13 0.069867 22.11 0.558742 =0.010673 0.11199 2.50E_13 0.069867 22.11 0.55817 =0.011158 0.11199 2.50E_13 0.067571 22.48 0.546491 =0.011153 0.111594 2.50E_14 0.065975 22.56 0.538341 =0.01153 0.111319 2.50E_14 0.065975 22.56 0.538341 =0.01152 0.111319 2.50E_14 0.065975 22.56 0.538341 =0.01159 0.11123 2.50E_14 0.065975 22.74 0.538341 =0.01159 0.11123	.630E-1	.07605	2.3	.58014	0.01007	12948
250E-11 0.074531 22.55 0.574147 -0.010283 0.12689 100E-11 0.073829 22.72 0.568541 0.010381 0.12649 100E-12 0.073829 22.72 0.56832 0.010381 0.126470 100E-12 0.077167 22.80 0.56832 0.010582 0.12530 150E-12 0.077167 22.86 0.56832 0.010572 0.120330 150E-12 0.070495 22.06 0.56832 0.010672 0.12092 150E-12 0.070495 22.06 0.59874 0.010672 0.12092 150E-13 0.069867 22.11 0.558742 0.010672 0.11093 150E-13 0.069867 22.11 0.553742 0.011048 0.11693 150E-13 0.0698109 22.34 0.551097 0.011048 0.11693 150E-13 0.067571 22.48 0.546491 0.01153 0.11594 150E-14 0.065975 22.56 0.538341 0.01153 0.111232 150E-14 0.065975 22.56 0.538341 0.011159 0.111232	400E-1	.07529	2.4	.57715	0.01017	.12819
1005-11 0.07310 22.80 0.56851 0.010331 0.12570 0.56851 0.07310 2.2570 0.56851 0.07310 0.07310 22.80 0.56832 0.010542 0.12330 0.12330 0.07310 2.2.80 0.56832 0.010542 0.12330 0.12330 0.071106 22.80 0.56032 0.010542 0.12330 0.071106 22.80 0.56032 0.010542 0.12330 0.056032 0.0010542 0.12106 0.056032 0.0010542 0.12106 0.12106 0.056032 0.0010542 0.12106 0.056032 0.0010542 0.11695 0.0011795 0.110693	.250E-1	.07453	5.5	57414	0.01028	.12689
630E-12 0.072424 22.80 0.565832 0.010592 0.12330 6.50E-12 0.071767 22.88 0.563240 0.010592 0.12330 6.50E-12 0.071106 22.96 0.56030 0.010579 0.12106 6.100E-12 0.069867 22.11 0.555742 0.010497 0.11205 6.30E-13 0.069267 22.11 0.555742 0.011048 0.11593 6.30E-13 0.069267 22.19 0.553742 0.011048 0.11593 6.50E-13 0.067571 22.40 0.56687 0.011343 0.11594 6.30E-13 0.067571 22.40 0.56687 0.011343 0.11594 6.30E-14 0.066485 22.55 0.54293 0.011343 0.113194 6.30E-14 0.065458 22.68 0.538341 0.011617 0.11232 6.30E-14 0.065458 22.68 0.538341 0.011795 0.110683	1006	07311	200	2686	86010	13447
400E=12 0.071767 22.88 0.563240 0.010679 0.2219 250E=12 0.071106 22.96 0.560530 0.010679 0.12106 100E=12 0.059867 22.11 0.555742 0.010670 0.11895 2630E=13 0.069267 22.19 0.555742 0.011068 0.11895 260E=13 0.069267 22.19 0.555742 0.011068 0.11895 260E=13 0.069751 22.26 0.551097 0.011068 0.11895 260E=13 0.067571 22.40 0.546677 0.011232 0.11896 260E=14 0.065458 22.55 0.54239 0.011628 0.11819 260E=14 0.065458 22.68 0.538341 0.011698 0.111232 260E=14 0.065459 22.74 0.538341 0.011709 0.111068	.630E-1	.07242	2.8	56583	0.0105	12330
250E_12 0.071106 22.94 0.56030 0.010779 0.12106 .160E_12 0.0070495 23.04 0.558217 0.010872 0.12002 .630E_13 0.069967 23.19 0.55574 0.011068 0.11793 .630E_13 0.06917 23.19 0.55574 0.011068 0.11793 .160E_13 0.068109 23.24 0.556803 0.01128 0.11594 .160E_13 0.067571 23.48 0.54697 0.011283 0.11594 .160E_13 0.06577 23.48 0.54697 0.011436 0.115194 .160E_14 0.06577 23.48 0.54697 0.011436 0.113194 .250E_14 0.06577 23.48 0.54697 0.011137 0.11232 .250E_14 0.06577 23.48 0.54697 0.011437 0.11232 .250E_14 0.06577 23.55 0.5589 0.011137 0.11232 .250E_14 0.06577 23.74 0.598450 0.0111795 0.110683	.400E-1	.07176	2.8	.56324	0.01007	2219
100E-12 0.00967 22.04 0.558217 -0.010872 0.12002 100E-12 0.009867 23.19 0.553742 -0.010870 0.11895 400E-13 0.009867 23.19 0.553742 -0.011158 0.11793 400E-13 0.0088109 23.24 0.554873 -0.011158 0.11895 100E-13 0.005771 23.48 0.554877 -0.011353 0.11596 100E-14 0.005771 23.48 0.54491 -0.011342 0.11819 400E-14 0.005975 23.59 0.54293 -0.011528 0.11319 150E-14 0.005975 23.59 0.538341 -0.011617 0.11232 150E-14 0.005979 23.74 0.538341 -0.011617 0.11063	.250E-1	07110	5.0	.56063	0.01077	.12106
430E=12 0.099867 22-11 0.553742 0.010470 0.111895 400E=13 0.098691 23-26 0.551097 0.011048 0.111895 400E=13 0.068691 22-34 0.551097 0.011153 0.111596 250E=13 0.067571 22-34 0.544803 0.011253 0.111596 100E=13 0.067571 23-48 0.544491 0.011343 0.111596 400E=14 0.0665975 23-55 0.54293 0.011528 0.111319 400E=14 0.065975 22-56 0.538341 0.0111617 0.111232 160E=14 0.066979 22-74 0.538341 0.011795 0.111063	. 160E-1	.07049	9.0	55821	0.01087	12002
2005-13 0.099267 22.19 0.55337 0.0011165 0.11793 0.0055107 0.0068691 22.24 0.551097 0.011156 0.111695 0.11793 0.11793 0.11793 0.115605 0.1	1000-1	98690		55574	0.01097	11895
250E-13 0.068109 22.34 0.54867 0.011353 0.115953 0.100E-13 0.067571 23.40 0.546677 0.011342 0.115954 0	400E	07600		16666	0011000	11179
1605-13 0.067571 22.40 0.546677 0.011322 0.11573 1005-13 0.067571 22.48 0.54491 0.011436 0.11510 1005-14 0.066485 22.55 0.54293 0.011528 0.11510 1005-14 0.065458 22.68 0.538341. 0.011617 0.11522 1605-14 0.065459 22.74 0.536450 0.011795 0.11063	250F	04810		K4080		11697
.100E-13 0.067017 23.48 0.54491 0.011436 0.11410 630E-14 0.066485 22.55 0.54293 0.011528 0.11319 630E-14 0.065975 22.68 0.538341 0.011617 0.11232 630E-14 0.065979 23.74 0.536450 0.011795 0.11063	160E-1	.06757	3.6	54667	0.01134	11904
530E_14 0.066485 23.55 0.542993 _0.011528 0.11319 400E_14 0.065975 23.61 0.540378 _0.011617 0.11232 250E_14 0.065458 23.68 0.538341 _0.011708 0.11145 60E_14 0.064979 23.74 0.536450 _0.011795 0.11063	100E-1	06701	3.4	54440	0.01143	11410
.400E_14 0.065975 23.61 0.540378 0.011617 0.11232 .250E_14 0.065458 23.68 0.538341 0.011708 0.11145 .160E_14 0.064979 22.74 0.536450 0.011795 0.11063	.630E-1	.06648	3.5	54239	0.01152	11319
250E-14 0.065458 23.68 0.5383410.011708 0.11145	1-300t	.06597	3.6	.54037	0.01161	11232
.160E-14 0.064979 23.74 0.536450 -0.011795 0.11063	.250E-1	.06545	3.6	.53834	0.01170	.11145
	.160E-1	.06497	7.	53645	0.01179	.11063

ABLES	0.2800
MONITOR TABLES	
PATTERN	A A I DR E
	F F0
BASEBAND FYF	TABLE FOR ATOR EQUALS

AIT FRROR	RATIO	SNR IN DB	RATIO	DERIV PER	CONSTANT
0-100E-02	18015	14.89		-0-011417	
.630E-03	17143	15.12			
.400E-03	0.163889	15.71			
.250F-03	0.156962	16.08			
1.160F-03	0.151083	16.42			
1.100F-03	0.145515	16.74		-0.005007	
.630E-04	0.140570	17.04			
*0-1005-0	0.136148	17.32			
250F-04	0.131968	17.59			
1.160F-04	0.128322	17.83			
1.100F-04	0.124780	18.08			
1.630F-05	0.121561	18.30			
\$0-300+°	0.118620	18.52			
2505-05	0,115785	18.73			
0.160F-05	0.113268	18.92	0.727236	-0.006768	0.192817
0-100F-05	0.110783	19.11			
0.630E-06	0.108488	19.29			
-400F-06	10636	19.46			
7.250F-06	10428	19.64			
1.160F-06	0.102422	19.79	0.684278		
\$100E-06	10056	19.95			
1.6306-07	.09882	20.10	0.670054		
-400F-07	.09719	20.25	0.663636		
1.250F-07	0.095597	20,39	0.657312		
1.160F-07	.09414	20.52			
0.100E-07	.09268	20.66			
0.630F-08	0.091315	20.79			
80-100+-0	20060	20.91			
1.250F-0A	.08874	21.04			
0-160F-08	0	21.15			
100E-08	.08638	21.27			
0-40E90	.08527	21,38			
60-30UT		21.49		-0.009102	
0.250F-09	.08315	21.60			
-160F-0	.08218	21.70			
1 1 1 1					

THE DE THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. ** RMS NOISE TO RMS SIGNAL RATIO. ** CIGNAL POWER TO MOTER BOWER IN DEFINES.	* ADAPTIVE THRESHOLD AMPLITUDE TO DESTITE. * DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO. * DUSTILINFAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMAIL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE . DIVIDER RATIO INTO DA CONVERTER.
NOMFNCLATURE:	A 1 S RATTO	A / D RATIO DFRIV DER WRT TIME CONSTANT

TABLES
MONITOR
PATTERN
FYE
BASFBAND

ALT FAROR	S \ Z	SNR	0 / W		TIME
	RATIO	1N 08	RATIO	WRT A / D	CONSTANT
0.6306-10	0,080271	21.91	0.596805	-0-009548	0.136664
	0.079384	22.01	0.593301	-0.009655	0.135154
	0.078495	22,10	0.589794	-0.009764	0-133642
	9.077678	22.19	0.586569	-0.009867	0.132251
	0.076844	22.29	0.583278	-0.009974	0.130832
	0.016050	22,38	0.580142	-0.010078	0.129480
	0.075292	22.47	0.577151	-0.010179	0-128190
	0.074531	22.55	0.574147	-0.010283	0.126895
	0.073829	22.64	0.571377	-0.010381	0.125700
	0.073110	22.72	0.568541	-0.010483	0.124477
	0.072424	22.80	0.565832	-0.010582	0.123309
	0.071767	22.88	0.563240	-0.010679	0.122191
	0.071106	22.96	0.560630	-0.010779	0.121065
	0.070495	23.04	0.558217	.0.010872	0,120025
	0.069867	23.11	0.555742	-0.010970	0.118957
	0.069267	23.19	0.553370	-0.011065	0.117934
	0.068691	23.26	0.551097	-0.011158	0.116953
	0.068109	23.34	0.548803	0.011253	0.115964
	0.067571	23.40	0.546677	-0.011342	0.115047
	0.067017	23.48	0.544491	-0.011436	0.114104
	0.066485	23.55	0.542393	-0.011528	0.113199
	0.065975	23.61	0.540378	-0-011617	0.112329
	0.065458	23.68	0.538341	-0.011708	0.111451
	0.064979	23.74	0.536450	-0.011795	0.110635
	0.064486	23 61	634600	200110	

NOMENCLATURE:

HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THRFE LEVEL EVE I.E., DECISION LEVEL.

A AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

N S RATIO = AMS SIGNAL RATIO.

S SAR = SIGNAL POMER TO NOISE POWER IN DECIBLES.

A A D RATIO = ADASTIVE THRESHOLD AMPLITUDE TO D RATIO.

DERIV PER WRT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.

TIME CONSTANT = JUASILINFAR TIME CONSTANT OF THE ADADTIVE THRESHOLD

LOOP FOR SMALL CHANGES AROUND STEAD STATE VALUES

WHEN BITF RATE = 12552600. AND ERROR SIGNAL

OLVIDER RATIO INTO D/A CONVENTER =

	14082	21484	25332	26186	.25413	.24254	23286	21485	20707	20204	19681	19190	18761	.18342	.17959	17605	17260	16951	.16643	14087	15822	15582	15341	.15114	.14900	.14688	.14495	14114	13030	13764	13604	13441	13287	13140	0.129934	12720	.12588	.12463	.12337	13771	11988	.11879	.11770	.11669	.11565	11409	1137	11186	11093	11005	10920	.10835	.10756	.10674
,,,,,		110000	00000	0.00498	0.00513	0.00538	2960000	000000	00000	0044	0.00663	0.00680	0.00695	0.00711	0.00726	0.00741	954000	0.00769	0.00784	16.00.0	110000	0.00837	0.00850	0.00863	0.00875	8880000	0060000	2160000	00000	0.00948	0.00959	0.00010	0.00982	2660000	0.010043	0.010	0.01036	0.01047	0.01057		0.010	0.01098	0.01108	0.01118	0.01128	0.01138		44110	0.01176	0.01185	0.01194	0.01204	0.01213	0.01222
WAS CALL	06424	03773	91286	.88850	.86447	.84339	66488	70243	77044	76687	75543	74446	.73474	.72516	.7.633	.70816	1001	.69302	.68586	47204	46681	66124	.65564	.65038	.64542	060099	63601	63147	42312	61907	.61535	.61158	. 60800	60459	118	59485	.59180	.58889	.58597	6 26 3 C 9	57789	.57537	.57283	.57048	.56808	11606.	66133	66100.	55714	55510	.55314	.55116	.54932	.54743
A			6.3	9.9	0.	6.					1	6.9	1.6	6.9	.5	6.7	8.0	0.0	7.0	900		1	6.0	1.0	1:	1.2	•			18	1.9	2.0	2.1	7.7	22.48	2.5	2.6	2.7	2.8	900	3.0	3.1	3.2	3.2	3.3				3.0	3.8	3.8	3.9	0	0.
TATED	14447	15022	15246	14672	14130	13649	12619	12458	17114	11801	11516	11241	10996	10755	10532	10326	10124	69660	207.00	96400	00281	09140	96680	.08865	.08739	.08615	10690	08387	08175	08073	.07979	.07883	.07793	01706	36	07460	.07383	.07309	.07235	70070	07031	.06967	.06903	.06843	.06783	*7190	00000	04540	06506	.06454	06405	.06355	.06308	.06260
13 61	A 30E	4006	250E-0	160E-0	.100E-0	0-30E9	3506.0	1405	1005	A 30F	400E-0	250E-0	160E-0	.100E-0	0-30E9	400E-0	250E-0	160E-0	1000-0	0-30E-0	250E-0	150E-0	1.00E-0	630E-0	-400E-0	250E-0	1605-0	1005-0	ADDE-D	250E-0	.160E-0	.100E-0	.630E-1	. 400E-1	77	100E-1	.630E-1	.400E-1	.250E-1	1006	630E-1	.400E-1	.250E-1	.160E-1	. 100E-1	4006	3605	1406	1005-1	630E-1	.400F-1	.250E-1	-160E-1	1006-1

TABLES	
MON! TOR	
PATTERN	
EYE	
ASEBAND	

	PSEUDO	BLE FOR ATO	TABLE FOR AIDR EQUALS 0.3000 PSEUDO ERROR RATE EQUALS 1.0 /	0.3000	
RIT FRROP	S / Z	SNR	0 / 4	DERIV PER	TIME
PATE	RATIO	1× 08	PATIO	WRT A / D	CONSTAN
1005-0	-	-	970	-0-011664	0.111.670
630F-0	=	5.5	956		0.160834
0.400E-03	-		937		0.214845
250F-0	15	16.34	912	c	0.253320
160F-0	7.	16.67	.888	-0.004983	0.261862
.100F-0	-	17.00	.864	0	0.254133
630E-0	.13	17.30	.843	ö	0.242544
0-400E-04	•	17.58	.824		0.231866
0.250E-04	•	17.85	.807	-0.005866	0.222441
0.160F-04	•	18.09	793		0.214856
0.100F-04		18,33		0	0.207975
0.630E-05	•	18.56	۲.		0.202040
0.400F-05	•	18.77	-	ċ	0.196814
0.250E-05	•	18.98	۲.	ō	0.191902
0.160E-05	•	19.17	٠.		0.187615
0-100E-05	•	19.37			0.183428
0.630E-06	•	19.55	۲.		0.179591
0.400F-06	•	19.72	۲.	ď.	0.176052
0.250F-06	•	19.89	۲.		0.172607
0.160E-06		20.05	٠.		0,169516
0.100F-06	•	20.21	•	-0.007840	0.166434
0.630E-07	•	20.36	۰.		0.163560
0.400F-07	•	20.50	٠.		0.160873
0.250E-07	•	20.65	٠.		0.158226
0.160E-07	•	20.78			0.155827
0.100E-07	•	20.02	٠.		0,153413
0.630E-08	•	21.05	•		0.151144
0.400F-08	•	21.17	•		0.149006
0.250E-08		21,29		c	0.146886
٦.	•	21.41	٠.	-0.009002	0.144952
.100E-0	•	21.53	٠.		0.142995
.630E-0	•	51.64	۰.		0.141145
-400F-	•	21.75	•		0.139393
SOF	0,080731	21.86	0.619070	084600-0-	0.137646
0.160F-09	•	21.96	•	-0.009592	0.136046
1001	•	c	•		0.134418

	HALF OF THE NORMAL DISTANCE BE WEEN DATA LEVELS FOR THE	THE THREE LEVEL EYE I.E. DEC. STON LEVEL.	AMPLITUDE OF INTERSYMBOL INTER: FRENCE TO D RATIO.	RMS NOISE TO RMS SIGNAL RATIO.	SIGNAL POWER TO NOISE POWER IN DECIBLES.	ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.	= DERIVATIVE OF PSEUDO ERROR RATH WITH RESPECT TO A / D PATIO.	DUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD	LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES	WHEN BITE RATE . 12552500. AND ERROR SIGNAL	DIVIDER RATIO INTO DIA CONVERTER . 4.
MOMENCLATURE:			ATDR =	N / S RATIO .	SNR		DERIV DER WRT =	TIME CONSTANT #			

BASFBAND FYF PATTERN MONITOR TABLES

RIT FRROR	SIZ	SNR	0/4	DERIV PER	TIME
RATE	RATIO	1N 08	RATIO	WRT A / D	CONSTANI
.630E-10	0,077931	22.17	0.608003	-0.009821	0,132873
-400F-10	0.077069	22.26	0.604597	-0.009930	0.131404
.250E-10	0.076204	22,36	0.601187	.0.010043	0.129934
0-160F-10	0,075413	22.45	0.598052	-0.010149	0,128581
.100E-10	0.074604	22.54	0.594852	-0.010259	0,127201
.630E-11	0,073832	22.64	0.591804	-0.010366	0,125886
.400F-11	0.073097	22.72	0.588896	-0.010470	0,124632
.250E-11	0.072358	22.81	0.585976	-0.010577	0.123372
.160F-11	0.071676	22.89	0.583283	-0.010678	0.122210
.100E-11	0.070979	22.98	0.580526	-0.010782	0.121021
0.630F-12	0,070312	23.06	0.577891	-0.010885	0.119885
.400E-12	0.069675	23.14	0.575372	-0.010984	0.118798
.250E-12	0.069033	23.72	0.572835	-0.011086	0.117704
.160E-12	0.068439	23.79	0.570489	-0.011183	0,116692
.100E-12	0.067830	23.37	0.568082	-0.011283	0,115653
.630F-13	0.067247	23.45	0.565776	-0.011381	0.114659
.400E-13	0.0666BR	23.52	0.563566	-0.011476	0,113705
.250E-13	0.066123	23.59	0.561336	-0.011574	0.112743
0.160E-13	0.065600	23.66	0.559269	-0.011666	0,111851
.100F-13	0.065063	23.73	0.557144	-0.011763	0.110934
.630E-14	0.064547	23.80	0.555104	-0.011857	0.110055
.400E-14	0.064051	23.87	0.553145	-0.011949	0.109209
0.250E-14	0.063550	23.94	0.551165	-0.012043	0.108355
0.160E-14	0.063085	24.00	0.549326	-0.012132	0.107562
1000					

NOMFNCLATURE:

* MALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THRFE LEVEL EYE I.E., DECISION LEVEL.

* AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

* SIGNAL POWER TO NOISE DOWER IN DECIBLES.

* ADAPTIVE THRESHOLD AMPLITUNE TO D RATIO.

* DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D PATIO.

* DOUSILINEAR THE CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES ADOUND STEADY STATE VALUES WHEN BITF RATE * 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER * ATDR N / S RATIO S A D RATIO DFRIV PER WRT TIME CONSTANT

1: 97

0.170107	15.82	95736	0.00832	15683
2	6.2	43687	0.00623	20935
192	9.9	.91519	0.00928	.24673
234	9.0	.89152	0.00511	.25495
5 9	1.5	91898	2000	23598
22	7.8	.82987	0.00578	.22554
28	8.1	.81338	0.0000	.21632
4 6	8.3	. 79925	0.00624	20891
47	8	77347	0.00664	19640
5	0.6	.76238	0.00692	.19130
3	8.5	.75172	6690000	.18650
99	4.0	92771	0.00715	.18232
16		72441	75/00 0	17671
9	6.6	71648	0.00762	17106
20		.70873	0.00778	.16771
4	0.3	.70177	0.00792	.16470
69	4.0	.69483	1080000	.16170
5	9.0	.68835	0.00821	.15890
	- (68230	0.00834	.15629
VE		47003	9 00000	1501.
9	•	26010	3600000	14004
0 00		. A 6038	0.00888	14683
-	7	6559A	10000	14475
0	1.5	.6507	0.00914	.14269
40	9.	.64641	0.00926	14081
0		002490	6660000	13891
TC		69764	1660000	13561
: 0	2.1	62995	0.00975	13371
9	2.2	.62634	18600.0	13216
0	2.3	. 62268	66600 0	.13058
20	3.0	.61920	0.01010	12907
0.5		41289	22010-0	126727
. 2	2.7	60003	0.01044	12490
36	2.8	60642	0.01056	12356
19	5.9	• 60346	0.01067	.12229
8:	6.0	. 50064	0.01077	12107
200	-	. KOK18	000000	11871
4	3.2	59251	0.01110	11756
20	3.3	.58995	0.01129	.11646
80	3.4	.58750	0.01130	.11540
5	3.4	.58504	0.01141	11434
00 6		.58276	0.01151	.11335
20	300	47818	191100	11139
. 00	3.7	57603	0.01181	11045
13	3.8	.57386	0.01191	10952
63	3.9	.57186	0.01201	.10865
10	4.0	.56979	0.01210	.10776
09	0.4	.56781	0.01220	16901.
12	4.1	0.565913	-0.012300	0.106089
		01000	6671000	
Z	4.2	56220	0.01248	10448

	TABL	TABLE FOR AIDR EQUALS PSEUDD ERROR RATE EQUALS	S 1.0	0036	
	בשבחתה ב			•0007	
AIT FAROR RATE	RATTO	SAR 1N DB	A / D RATIO	DERIV PER	TIME
~	0.170107	5.3	97084	6110	10922
30F-03	0.161733		0.957368	-0-008320	0.156836
0-400F-03	0.154517	6.9	93887	0062	0.209357
3	0.147923		91519	-0.005289	0.246735
	0.142346	·c	89152	-0.00511R	0.254954
3	0.137074	17.26	86818	-0.005276	0.247336
,	0.132400	17.56	84772	-0.005530	0.235985
***********	0,128225	17.84	.82987	-0.005786	0.225541
4	0.124282	18.11	81338	-0.006032	0.216327
4	0,120845	18,36	79925	-0.006246	0.208915
4	0.117507	18.60	78569	-0.006454	0.202194
0.630E-05	0.114474	18.83	77347	-0.006644	0.196400
8	0.111704	19.04	.76238	-0.006821	0.191300
	0,109033	19.25	.75172	966900-0-	0.186509
.160F-05	0,106663	19.66	.74229	-0.007157	0,182329
	0.104322	19.63	.73299	-0.007321	0.178249
0-40E90	0,102161	19.81	.72441	-0.007478	0.174511
•	0,100160	19.99	.71648	0016	0.171065
0.250E-06	0.098205	20.16	0.708736	-0.007781	0.167710
•	0,096440	16.02	.70177	001	0.164703
•	0.094695	20.47	۹.	0000	0.161703
-	0.093059	20.62	.68835	,0082	0.158908
1-400F-07	0.091530	20.77	٠.	-0.008349	0.156294
1	0.090022	20.91	۰	0084	0.153719
160F-07	0.088656	21.05	٠.	0086	0.151387
.100E-07	0.087281	21.18	•	.0087	0.149040
æ	0.085989	21.31	٠.	0.0088	0.146834
400F-08	0.084777	21.43	٠.	0600	0.144756
•	0.083565	21.56	٠.	000	0.142695
.160F-08	C.082464	21.67	•	0092	0.140816
	0.081350	21.79	•	0.0093	0.138914
30E-09	٠.	21.91	٠.	0.0095	0.137116
60-		22.01	•	0.0096	0.135413
60-	0	22,12		0.0097	0.133716
60F-09	.077	22.73	•	0.0098	0.132161
60-	07646	22 23	•	0000	00000

	THE			# RMS NOISE TO RMS SIGNAL RATIO.			D RATIO.					
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יווייביירים וחיביי	0		ATDR	N / S RATIO	SNR	A / D RATIO	DFRIV PER WRT	TIME CONSTANT				

TABLES
MONITOR
PATTERN
FVF
ASEBAND

0	2800.
0.3200	1.001
R EDUALS	RATE EQUALS
FOR AID	SR RATE
TABLE FOR !	SEUDO ERRO

TIME	0.129078	0.127651	0.126222	0.124909	0.123568	0.122290	0.121072	0.119848	0.118719	0.117564	0.116460	0.115404	0,114341	0,113358	0,112349	0,111383	0.110456	0.109522	0.108656	0.107765	0,106910	0.106089	0,105259	0,104489	0.103695
DERIV PER	•0.010109	-0.010222	-0.010338	-0.010447	-0.010560	-0.010671	-0.010778	-0.010888	-0.010992	-0.011100	-0.011205	-0.011307	-0.011412	-0.011511	-0.011615	-0.011716	-0.011814	-0.011915	-0.012010	-0.012109	-0.012206	-0.012300	-0.012397	-0.012489	-0.012584
RATTO	0.619202	0.615894	0,612581	0.609536	0.606428	0.603467	0.600642	0.597805	0.595189	0.592511	0.589952	0.587504	0.585040	0.582761	0.580422	0.578183	0.576036	0.573869	0.571861	0.569797	0.567816	0.565913	0.563989	0.562202	0.560362
SAR 14 08	22.43	22.53	22.43	27.72	22.81	22.90	22.99	23.08	23.16	23.24	23.32	23.40	23.48	23.56	23.64	23.71	23.78	23.86	23.93	24.00	24.07	24.13	24.20	24.27	24,33
RATIO	0.075590	0.074754	0.073917	0.073148	0,072363	0.071614	0.070901	0.070184	0.069523	0.068847	0.068200	0.067582	0.066959	0.066383	0.065793	0.065227	0.064684	0.064137	0.063630	0.063108	0.062608	0.062127	0.061641	0.061189	0.060725
PIT FROR	0.630F-10	0.400F-10	0.250E-10	0.160F-10	0.100F-10	7.630E-11	0.400F-11	7.250E-11	0.160F-11	0.100E-11	0.630E-12	0.400E-12	0.250F-12	0.160F-12	0.100E-12	0.630E-13	0.400F-13	0.250E-13	0.160F-13	0.100F-13	0.630F-14	0.400E-14	0.250F-14	0.160F-14	0.100E-14

NOWFOCLATURE:

HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THREE LEVEL EVE I.E., DECISION LEVEL.

A 10 = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

Y 5 RATIO = AMS NOTS F TO RESSIGNAL RATIO.

S SIGNAL POWER TO NOISE POWER IN DECIBLES.

A 7 D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.

DERIV PER WRT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A 7 D RATIO.

LOOP FOR SAMIL CHANGES AROUND STEADY STATE VALUES.

WHEN BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATE INTO D/A CONVERTER =

69639	20361	23080	2070	24033	22925	.21907	.21009	.20287	19632	19068	10101	17700	17303	.16939	16270	15987	.15695	15454	14920	.14693	.14466	.14251	14850	13667	.13482	19308	12978	12827	.12674	12389	12251	1212	11869	.11751	11632	11410	.11303	11201	11002	10904	.10810	.10720	10630	10459	.10376	.10296	.10216
00	668999	04900	******	00000	0.00569	0.00595	0.00621	0.00643	999000	900000	00100	0.00737	0.00754	0.00170	0.00785	0.00816	0.00831	9980000	0.00860	0.00888	0.00902	0.00915	0.00928	0.00954	0.00967	0960000	26600	0.01017	0.01029	0.01053	0.01065	01076	0.01099	0.01110	0.01121	0.01143	0.01154	0.01165	0.01184	0.01196	0.01207	0.01217	72210-0	0.01247	0.01257	0.01267	0.01277
0.971605	70004	94036	86116	1107	85213	. 83481	.81882	. 80511	79196	78011	75003	76985	74083	.73251	72481	71054	.70380	.69752	68584	68060	.67531	67035	40104	65681	.65253	.64848	66083	63733	.63378	62719	.62397	102	61512	.61238	.60963	60440	.60201	.59963	50503	59276	.59058	.58850	09996	58245	58055	.57868	.57681
15.65					8	1.0	8.3	9.6	8.8				6	0.0	~ •		7.0	6.0		1.3		5.		-	2.0	2.0	7.7	2.3	2.6	2.8	2.9	2.0	3.1	3.2	6.6	3.5	3.6	3.6		3.9	3.0	0.	- (2.7	.3	4.4	4.
0.164961	14077	16336	13706	13283	12830	.12425	.12043	11710	11386	26011	10565	10336	10109	66860.	09516	09346	.09176	1000	08723	.08591	.08457	.08332	08087	16610	.07883	19470	07588	.07499	07410	07243	.07162	07088	06939	.06870	.06801	06671	.06603	.06548	06432	.06375	.06320	.06268	01290	06115	.06066	.06020	.05973
100E-02	000		2	O. P.	SOE	300	SOE	SOE	1000	1000	2505	160E-0	100E-0	0-30E9	250F-0	50E-0	0-30C	090E90	506-0	.160E-0	.100E-0	0-30E-0	250F-0	160E-0	.100E-0	630E-0	2506-0	.160E-0	100E-0	400E-1	.250E-1	.160E-10	630E-1	.400E-1	-250E-1	100E-1	.630E-1	. 400E-1	I POE	1-30C	30E-1	00E-1	1-2067	1006-1	.630E-1	-400E-1	.250E-1

TABLES
MONITOR
PATTERN
FYF
ASFBAND

### FRRDR N / S SNR A / D DERIV PER TIME RATE N		TAB PSEUDO FI	TABLE FOR AIDR EQUALS PSEUDN FRROR RATE EQUALS	-	0.3400	
0.164961 15.65 0.971605 -0.012265 0.164961 15.65 0.164961 15.65 0.971605 -0.015265 0.164772 16.49 0.9495823 -0.006540 0.137951 16.87 0.917585 -0.005460 0.137951 17.21 0.917585 -0.005460 0.137951 17.21 0.874619 -0.005460 0.137951 17.21 0.874619 -0.0054610 0.128834 17.21 0.874619 -0.005461 0.128834 17.21 0.874619 -0.005461 0.128834 17.21 18.11 0.874619 -0.005461 0.128834 17.21 18.11 0.874619 -0.005461 0.13869 19.10 0.78916 -0.005421 0.13869 19.10 0.78916 -0.005421 0.105657 19.21 0.76948 -0.005421 0.105657 19.21 0.76948 -0.007703 0.105657 19.21 0.76948 -0.007703 0.105657 19.21 0.76948 -0.007703 0.105657 19.21 0.76948 -0.007703 0.105657 19.21 0.76948 -0.007703 0.006643 0.007703 0.00	ALT FROB	RATIO	SNR TN DB	A / D RATTO	PE -	TIME
0.156795 16.09 0.95823 -0.008580 0.149372 16.09 0.95823 -0.008540 0.149372 16.09 0.95823 -0.008540 0.149385 17.21 17.21 0.871979 -0.008540 0.128304 17.21 0.871979 -0.008540 0.128304 17.21 0.871979 -0.008540 0.120435 17.21 0.871979 -0.008541 0.008541 0.120435 17.21 0.871979 -0.008541 0.008541 0.120435 18.38 0.838114 -0.008541 0.008541 0.112842 18.38 0.838114 -0.008541 0.008541 0.112842 18.38 0.008541 0.008541 0.112842 18.38 0.008541 0.008541 0.108557 19.31 0.789113 -0.008541 0.008541 0.108557 19.31 0.789113 -0.008541 0.0097124 0.00		16496	4	97140	01226	10439
0.149772 16.49 0.940949 0.0006409 0.132836 16.87 0.852133 0.005540 0.132836 17.53 0.871979 0.005540 0.128364 17.53 0.871979 0.005540 0.128364 17.53 0.871979 0.005540 0.128364 17.53 0.871979 0.005592 0.128364 18.83 0.87116 0.005957 0.108245 18.83 0.87116 0.005957 0.108245 19.31 0.780113 0.005647 0.108245 19.31 0.780113 0.005647 0.108245 19.31 0.780113 0.005647 0.108557 19.31 0.740939 0.007772 0.108462 20.43 0.740939 0.007772 0.0097163 20.75 0.740939 0.007772 0.0097163 20.75 0.740939 0.007772 0.0097163 20.75 0.009721 0.006602 0.009897 20.43 0.717998 0.007772 0.0097163 20.75 0.659640 0.006811 0.097163 21.00 0.655849 0.009789 0.0086578 21.00 0.655818 0.009728 0.0086578 21.00 0.655818 0.009728 0.0078831 22.75 0.65686 0.009928 0.076844 22.29 0.644656 0.009928 0.076841 22.29 0.644656 0.009928 0.076811 22.40 0.65938 0.001773		15679	0.9	95852	00855	0-152620
0.153365 16.87 0.917585 -0.005440 0.137951 17.21 0.894419 -0.005546 0.137951 17.21 0.894419 -0.005546 0.128344 17.21 0.871979 -0.005546 0.128344 17.21 0.871979 -0.005546 0.128344 17.21 0.871979 -0.005642 0.12842 18.11 0.87184 -0.005642 0.12842 18.11 0.87184 -0.005642 0.113869 18.87 0.895116 -0.006642 0.113869 18.87 0.895146 -0.006642 0.113869 18.87 0.895146 -0.006642 0.113869 18.87 0.895146 -0.006642 0.113869 18.87 0.895146 -0.006642 0.105657 19.87 0.895113 -0.006642 0.006642 0.105657 19.97 0.876912 -0.007772 0.105657 19.97 0.876912 -0.007772 0.0	0.400E-03	.14977	4.9	.94056	.00640	0.203616
0.137951 17.21 0.894619 -0.005266 0.132836 17.53 0.871979 -0.0055430 0.124257 18.11 0.894619 -0.0055430 0.124257 18.11 0.894619 -0.0056430 0.124257 18.11 0.894619 -0.0056431 0.124257 18.11 0.894619 -0.0056431 0.124257 18.11 0.894619 -0.0056431 0.10929 19.10 0.791064 -0.006432 0.110929 19.10 0.791064 -0.006432 0.110929 19.10 0.791064 -0.006432 0.110929 19.10 0.791064 -0.006432 0.1093657 19.75 0.759013 -0.006432 0.1093657 19.75 0.759013 -0.007028 0.0093657 0.0077377 0.003462 0.0077377 0.007777 0.0	0.250E-03	.14336	8.9	.91758	.00544	0.239882
0.132836 17.53 0.871979 0.0056430 0.128304 17.53 0.871979 0.0056430 0.126435 18.84 0.852419 0.0056422 0.120435 18.84 0.8356119 0.0056427 0.120435 18.84 0.8356119 0.0056427 0.112862 19.10 0.815816 0.0066427 0.112862 19.10 0.780113 0.0066427 0.105829 19.10 0.780113 0.0066427 0.105829 19.10 0.780113 0.0066427 0.105829 19.10 0.780113 0.0066427 0.105657 19.45 0.0078219	0.160F-03	7	17.21	.89461	.00526	0.247800
0.128304 17.84 0.852133 0.005692 0.128324 18.11 0.834819 0.0058937 0.128255 18.11 0.814824 0.0056937 0.128255 18.11 0.814824 0.0066431 0.117103 18.43 0.805918 0.006647 0.110929 18.87 0.805918 0.006647 0.110929 18.87 0.805918 0.006647 0.110929 18.87 0.805918 0.007822 0.105657 19.87 0.85918 0.007822 0.007822 0.009782 0.007822 0.009781 0.009782 0.009741 0.009782 0.009741 0.009781 0	0.100F-03	7	17.53	.87197	.00543	0.240332
0.124257 18.11 0.834619 0.0004511 0.120435 18.38 0.83516 0.0004211 0.113869 18.37 0.791964 0.000643 0.110929 19.10 0.791964 0.006447 0.110929 19.10 0.791964 0.0007372 0.105657 19.31 0.759318 0.0077207 0.105657 19.31 0.759318 0.0077207 0.105657 19.31 0.759318 0.0077207 0.003462 20.43 0.710746 0.007741 0.09360 10.91 10.91 0.740859 0.007772 0.001763 20.43 0.710746 0.007741 0.09365 20.43 0.710746 0.007741 0.09365 20.43 0.710746 0.008811 0.08578 20.43 0.710746 0.008881 0.08378 21.32 0.660600 0.0009288 0.08332 21.32 0.660600 0.0009288 0.075831 22.71 0.665679 0.009928 0.075844 22.29 0.64656 0.009928 0.075881 22.40 0.64656 0.009928 0.075881 22.40 0.64656 0.009928 0.075881 22.40 0.64656 0.009928	0.630F-04	٦.	17.84	.05213	.00569	0.229254
0.120435 18.38 0.818824 0.006431 0.117103 18.43 0.818824 0.006432 0.110929 19.10 0.791964 0.006843 0.106845 19.31 0.769348 0.007207 0.106857 19.31 0.76939 0.007207 0.101091 19.91 0.76989 0.007207 0.098997 20.09 0.76989 0.007207 0.097164 20.43 0.77684 0.007341 0.097165 20.43 0.77648 0.007341 0.097165 20.43 0.77648 0.007341 0.097165 20.43 0.710546 0.007341 0.097167 20.40 0.726415 0.007341 0.097167 20.40 0.697841 0.007341 0.09895 21.04 0.697841 0.007841 0.08657 21.04 0.697841 0.007841 0.08657 21.04 0.697841 0.007841 0.08657 21.07 0.697841 0.007841 0.08657 21.07 0.697841 0.007841 0.08657 21.07 0.697841 0.007841 0.08657 21.07 0.697841 0.007841 0.087910 21.32 0.697834 0.007928 0.078831 22.07 0.657834 0.007928 0.07884 22.29 0.644656 0.007928 0.07684 22.29 0.644656 0.007928 0.07684 22.29 0.644656 0.007929	0-400E-04	0.124257	18.11	.83481	.00595	0.219071
0.117103 18.63 0.805116 0.006647 0.117103 18.63 0.805116 0.006647 0.1108245 19.11 0.780113 0.006647 0.1108245 19.11 0.780113 0.006647 0.1108245 19.11 0.780113 0.006647 0.106647 0.106645 19.11 0.780113 0.007024 0.007024 0.106657 19.11 0.780113 0.780112 0.007024 0.007024 0.007024 0.107034 0.007024 0.0	0.250F-04	0,120435	18.38	.81882	.00621	0.210093
0.113869 18.87 0.791964 .0.006647 0.110929 19.10 0.769348 .0.006643 0.105657 19.81 0.769348 .0.006643 0.105657 19.81 0.769348 .0.007207 0.105657 19.81 0.769348 .0.007372 0.105657 19.91 0.769348 .0.007372 0.1059360 19.91 0.769358 .0.007372 0.1059362 20.009362 0.769358 .0.007374 0.009362 20.009362	0.160F-04	0,117103	18.63	11508.	.00643	0.202873
0.110929 19.10 0.780113 0.008843 0.0008843 0.10826 0.10825 19.31 0.750912 0.0007022 0.10835 19.31 0.750912 0.0007022 0.10835 19.31 0.750912 0.0007022 0.0008943 0.0007877 19.32 10.32 19.32 19.32 10.007703 0.0098947 20.009 10.32 19.32 1	0.100F-04	0,113869	18.87	.79196	*9900	0.196328
0.108245 19.31 0.769348 0.0007207 0.105657 19.32 0.769348 0.0007207 0.105657 19.31 0.769348 0.0007207 0.105657 19.32 0.769348 0.0007207 0.105657 19.32 0.769395 0.0007207 0.0098997 20.25 0.000733 0.009703 0.007703 0.009703 0.009703 0.007703 0.009703 0.009703 0.009703 0.007703 0.009703 0.009703 0.007703 0.009703 0.007703 0.009703 0.009703 0.007703 0.009703 0.009703 0.007703 0.009703 0.009703 0.007710 0.009703 0.007710 0.009703 0.007710 0.009703 0.007710 0.009703 0.007710 0.009703 0.007710 0.009703 0.007710 0.009703 0.007710 0.009703 0.007710 0.009703 0.007710 0.009703 0.009703 0.009703 0.007710 0.009703 0.007710 0.009703 0.007710 0.009703 0.007710 0.009703 0.009703 0.009703 0.009701 0.009703 0.009701 0.0097	0.630E-05	0,110929	19.10	.78011	.00684	0.190688
0.105657 19.52 0.750117 0.007207 0.103360 19.71 0.740835 0.0007207 0.0103360 19.71 0.740835 0.0007372 0.009897 20.09 0.740835 0.0007703 0.098997 20.09 0.742815 0.0007703 0.097703 0.097703 0.097703 0.097703 0.000770703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007703 0.0007707070707070707070707070707070707	0-400F-05	0,108245	19.31	.76934	.00702	0.185725
0.103360 19.71 0.749859 0.0.0073772 0.0.01091 19.91 0.746859 0.0.007341 0.0.097841 0.0.097088 0.0.007641 0.097088 0.0.097088 0.0.097088 0.0.097088 0.0.097088 0.0.09708 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971108 0.0.0971109	0.250F.05	10565	19.52	.75901	.00720	0.181065
0.101091 19.91 0.7408350.007541 0.0098997 20.09 0.7248150.007703 0.098997 20.29 0.7248150.007703 0.098997 20.29 0.7248150.007703 0.095154 20.24 0.77248150.008016 0.093462 20.75 0.7724980.008142 0.09177 20.29 0.775460.008142 0.09177 20.29 0.6975210.008414 0.087734 21.39 0.6975210.008446 0.087734 21.39 0.6975490.008746 0.088746 0.088746 0.088746 0.088746 0.088746 0.088746 0.088746 0.088746 0.088747 21.37 0.656000.0095156 0.088374 21.45 0.6560190.0095156 0.0887318 21.45 0.6560190.0095156 0.088741 21.45 0.6560190.009547 0.088741 21.45 0.6560190.009547 0.088741 21.45 0.6560190.009547 0.088741 21.45 0.6560190.009547 0.087811 22.79 0.6560180.009547 0.087811 22.79 0.6560180.009547 0.077811 22.79 0.6560180.009547 0.077811 22.79 0.6560180.009547 0.077811 22.79 0.6560180.009547 0.077811 22.79 0.6560180.009547 0.077811 22.79 0.6560180.009547 0.0774101 22.70 0.65037800.010296	0-160F-05	0,103360	19.71	.74985	12100	0.177000
0.098997 20.09 0.732516007703 0.097058 20.25 0.7179980.007858 0.093462 20.45 0.7179980.00816. 0.093462 20.45 0.71799800816. 0.091763 20.75 0.71799800816. 0.088695 21.00 0.697821006802 0.086578 21.32 0.697821008846 0.086578 21.32 0.697840098281 0.088578 21.32 0.668680094288 0.088578 21.45 0.658790094288 0.088578 21.45 0.65879009428 0.088578 21.45 0.65879009428 0.079310 22.47 0.658812009428 0.078831 22.77 0.658812009428 0.076844 22.29 0.644656009428 0.076844 22.29 0.644656009928 0.074910 22.40 0.646656009928	0-100F-05	0,101091	19.91	.74083	00754	0.173033
0.097058 20,26 0,724815	0.630F-06	0.098997	50.09	.73251	00110	0,169399
0.095154 20.43 0.7172980.008016 0.093462 20.459 0.7105980.008162 0.090177 20.40 0.6975210.008460 0.08695 21.04 0.6975210.008462 0.086973 21.04 0.6916420.008462 0.086973 21.45 0.6906000.008846 0.086578 21.45 0.6973180.009621 0.083326 21.45 0.6973180.009621 0.080977 21.43 0.6656790.009622 0.078810 22.18 0.6668660.009678 0.078841 22.18 0.6668660.009678 0.078841 22.29 0.6668660.009678 0.078881 22.29 0.6668660.009678 0.076842 22.29 0.6668660.009678 0.076842 22.29 0.6668660.009678	0-400F-0	0.097058	20.76	.72481	.00785	0,166051
0.093462 20.59 0.710546 0.008862 0.091763 20.75 0.703807 0.008314 0.086695 21.04 0.691642 0.008602 0.086578 21.32 0.691642 0.008846 0.086578 21.32 0.691642 0.008846 0.086578 21.45 0.69168 0.009021 0.083326 21.45 0.65680 0.009021 0.082147 21.45 0.656818 0.009021 0.082147 21.45 0.656812 0.009021 0.082147 21.45 0.656812 0.009021 0.078831 22.79 0.65686 0.009678 0.076844 22.29 0.656466 0.009678 0.076840 22.29 0.654666 0.009678	0.250F-06		20.43	.71729	00801	0.162792
0.091763 20.75 0.70807 0.008314 0.090177 20.90 0.69751 0.008660 0.086590 22.09 0.6975642 0.008660 0.085916 21.32 0.686600 0.0008811 0.083326 21.85 0.675318 0.009281 0.083326 21.85 0.675318 0.009281 0.083327 21.83 0.65679 0.009281 0.075831 22.07 0.656812 0.009547 0.075881 22.29 0.65688 0.009547 0.075881 22.29 0.64686 0.009928 0.075881 22.29 0.64686 0.009928 0.075881 22.29 0.64686 0.009928	0-160F-06		50.59	.710	.00816	0.159870
0.090177 20.90 0.697521 -0.008640 0.088695 21.014 0.6916649 -0.008602 0.088578 21.32 0.688649 -0.008681 0.086578 21.45 0.6675318 -0.009021 0.083326 21.45 0.6575318 -0.009021 0.083327 21.45 0.657579 -0.009156 0.080977 21.43 0.655879 -0.009422 0.078810 22.45 0.656864 -0.009805 0.077810 22.18 0.656864 -0.009805 0.077811 22.29 0.656866 -0.009805 0.077811 22.20 0.656866 -0.009805 0.077811 22.20 0.656866 -0.009805 0.077811 22.20 0.656866 -0.009805	0-100E-06		20.75	. 703	.00831	0.156957
0.088695 21.004 0.6916420.006602 0.084734 21.39 0.6856000.008746 0.086578 21.45 0.6853180.009021 0.083325 21.45 0.6753180.009156 0.083327 21.45 0.6563180.009156 0.080377 21.43 0.665040.009422 0.078831 22.79 0.6568120.009678 0.07884 22.29 0.656860.009678 0.07684 22.29 0.656860.009678 0.07684 22.29 0.656860.009678 0.07684 22.29 0.656860.009678	0.630F-07		20.90	.697	99800	0.154241
0.087234 27.19 0.688849 .0.008846 0.085910 0.085910 0.085910 0.0088811 0.085918 0.00088811 0.085918 0.00088811 0.088318 0.00098811 0.088318 0.0009156 0.088318 0.0009156 0.089910 21.95 0.055812 0.0009547 0.0075810 22.18 0.056886 0.0009547 0.0075881 22.29 0.054686 0.0009581 0.075881 22.29 0.054686 0.0009581 0.075881 22.29 0.054686 0.0009581 0.075881 22.29 0.054686 0.0009581 0.075881 22.20 0.054686 0.0009581 0.075881 22.20 0.054686 0.0009581 0.075881 22.20 0.054686 0.0009581 0.075881 22.20 0.054388 0.0010054 0.000054	0.400F-07		21.04	169.	09800	0.151703
0.085910 21.32 0.680600 0.0008881 0.0008881 0.0064578 21.45 0.675318 0.0009021 0.084578 21.45 0.675318 0.0009021 0.0845147 21.71 0.665679 0.000956 0.000977 21.83 0.6661041 0.0009547 0.079910 22.07 0.656812 0.0009678 0.077810 22.07 0.64686 0.0009805 0.077810 22.20 0.64686 0.0009805 0.077884 22.29 0.64685 0.0009805 0.077884 22.29 0.64685 0.0009805 0.077881 22.40 0.640838 0.0010054 0.0778101 22.40 0.640838 0.0010054 0.0074101 22.40 0.633380 0.0010296	0.2505-07		21.19	.685	0.00874	0.149203
0.084578 21.45 0.675318 0.009021 0.083326 21.45 0.670354 0.0009156 0.080977 21.83 0.665679 0.009422 0.078910 21.85 0.656812 0.009422 0.078810 22.77 0.652532 0.0099678 0.077810 22.78 0.64686 0.0099678 0.07684 22.29 0.646656 0.0099678 0.075881 22.20 0.646656 0.0099678 0.074101 22.60 0.64384 0.010054	0.160F-07	.08591	21.32	.680	.00888	0.146938
0.083326 21.58 0.65059 0.000156 0.0082147 21.21 0.665659 0.0009288 0.009288 0.009288 0.0092817 21.83 0.665812 0.009288 0.00928 0.009288 0.009883 22.80 0.652832 0.009928 0.0076844 22.29 0.646466 0.009928 0.007684 22.29 0.646466 0.009928 0.007499 22.40 0.646466 0.009928 0.007499 22.40 0.64666 0.009928 0.007499 22.40 0.64666 0.009928 0.007499 22.40 0.64666 0.009928 0.007499 22.40 0.64666 0.009928 0.007499 22.40 0.64666 0.009928 0.007499 0.009929 0.009499 0.0094	0.100F-07	.08457	21.45	.675	.00902	0.144660
0.082147 21.71 0.665679 .0.009288 0.080977 21.83 0.661041 .0.009422 0.078831 22.07 0.65232 .0.009678 0.077810 22.18 0.648486 .0.009805 0.07781 22.29 0.648486 .0.009805 0.07781 22.40 0.646856 .0.010928 0.074101 22.40 0.643338 .0.010103	0-50E90	.08332	21.58	.670	.00915	0.142518
0.080977 21.83 0.6610410.009422 0.079910 21.95 0.6568120.009547 0.077810 22.18 0.6468660.009605 0.077811 22.18 0.6468660.009805 0.075881 22.40 0.6468560.00928 0.075881 22.40 0.6468560.010054 0.074101 22.60 0.633380 .0.0101296	0-400F-08	č	21.71	.66567	.00928	0.140501
0.079910 21.95 0.6568120.009547 0.078831 22-07 0.65528220.009678 0.076844 22-18 0.6464860.009928 0.076848 22-29 0.6446560.009928 0.075881 22-40 0.6446560.010054 0.074101 22-40 0.6337800.010129	0.250F-08	80.	21.83	.66104	.00942	0.138500
0.078831 22.07 0.6525320.009678 0.077810 22.18 0.646680.009805 0.076844 22.29 0.6446560.009928 0.077891 22.40 0.6408360.010079 0.074998 22.50 0.6408360.010173	0.160F-0R	.07991	21.95	.65681	.00954	0.136676
0.077810 22.18 0.6484860.009805 0.076844 22.29 0.6446560.00928 0.075881 22.40 0.6440360.010054 0.074908 22.50 0.6337880.010173	0.100F-08	.07883	22.07	.65253	19600	0.134829
0.076844 27.29 0.6446560.009928 0.075881 22.40 0.6460860.010054 0.07490 22.50 0.633380.010173 0.074101 22.60 0.633780 .0.010296	0-630F-09	.07781	22.18	.64848	00600	0.133084
.250F.09	0-400F-09	.07684	52.29	.64465	00992	0.131431
.160F=09 0.074998 22.50 0.637338 -0.010173 .100F=09 0.074101 22.60 0.633780 -0.010296	-250F-0	.075AB	22.40	.64083	01005	0.129784
.100F-09 0.074101 22.60 0.633780 -0.010296	-160F-0	6740	22.50	.63733	.01017	0.128274
	-100F	.0741	22.60	.63378	.01029	0.126740

= MALE OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	THE THREE LEVEL EVE I.E., DECISION LEVEL. = AMPLITUDE OF INTERFERENCE TO D RATIO. = RMS NOISE TO RMS SIGNAL RATIO. = SIGNAL, POWER TO NOISE ROWER IN DECIBLES.	* ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO. * DEPINATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D PATIO. * OUSSILLINERR TIME CONSTANT OF THE ADAPTIVE THRESHOLD ** OOD FOR SHALL CLANGER ADAINST STATE VALUE.	AHEN BITE RATE : 12592600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.
MOMENCLATURE:	AIDR N / S RATIO	A / D RATIO DERIV PER WRT TIME CONSTANT	

TABLES
MONITOR
PATTERN
FYF
BASFBAND

	PSEUDO E	RROR RATE	TABLE FOR ATOR EQUALS 0.3400 PSEUDO ERROR RATE EQUALS 1.0 /	0.3400	
BIT FRROR	RATIO	SNR TN DB	RATTO	DERIV PER	CONSTANT
0.630F-10	0,073249	22.70	0.630402	-0.010416	0,125282
0.400E-10	0.072439	22.80	0.627191	-0.010532	0.123897
0.250F-10	0.071628	22.90	0.623976	-0.010651	0,122510
0.160F-10	0.070882	22.99	0.621020	-0.010763	0,121235
0.100E-10	0.070121	23.08	0.618003	-0.010880	0.119934
0.630E-11	0.069397	23.17	0.615129	-0.010994	0,118694
0.400E-11	0.068705	23.26	0.61238R	-0.011105	0,117511
0.250E-11	0.068011	23.35	0.609634	-0.011218	0,116323
0.160F-11	0.067370	23.43	0.607095	*0.011325	0,115228
0.100E-11	0.066714	23.52	0.604495	-0.011436	0.114106
0.630F-12	0.066088	23.40	0.602012	-0.011544	0.113035
0.400E-12	0.065489	23.48	0.599636	-0.011650	0,112010
0.250F-12	0.064885	23.76	0.5	-0.011758	0,110978
0.160F-12	0.064327	23.83	0.59903\$.0.011860	0.110024
0,100E-12	0.063755	23.91	0.592763	-0.011967	0,109045
0.630E-13	0.063207	23.98	0.590589	-0.012071	0.108107
0.400E-13	0.062681	54.06	0.588505	-0.012172	0.107208
0.250E-13	0.062151	24.13	0.586402	-0.012276	0,106301
0-160E-13	0.061659	24.20	0.584454	-0.012374	0.105460
0.100E-13	0.061154	24.77	0.582450	-0.012476	0.104595
0.630E-14	0,060669	24.34	0.580527	-0.012576	0.103766
0.400E-14	0.060203	24.41	0.578680	-0.012673	0.102969
0.250F-14	0.059732	24.48	0.576812	-0.012773	0.102163
0.160F-14	0.059294	24.54	0.575079	-0.012867	0.101415
0-100F-14	0.058844	24.61	0.573293	-0-012965	0.100645

* HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THEFE I EVEL EVE I EVE I EVEL EVEL	* AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. * PMS NOISE TO RMS SIGNAL RATIO. * SIGNAL POWER TO NOISE POWER IN DECIBLES.	* ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO. * DERIVATIVE DE PSEUDD ERROR RATE WITH RESPECT TO A / D PATIO. * DUASILIUMEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SHAIL CHANGES AROUND STEADY STATE VALUES WHEN BITE GATE * 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER *
# HALF OF THF NORMAL DI	# AMPLITUDE OF INTERSY # PMS NOISE TO RMS SIGN # SIGNAL POWER TO NOISE	* ADAPTIVE THRESHOLD AMPLITUDE TO D IN THE CONSTANT RATE WITH CONSTANT OF THE ACCUSTANT OF
NOMENCLATURE:	ATDR N / S RATTO SNR	A / D RATIO DERIV DER WRT TIME CONSTANT

10363	16824	10760	23284	24048	23319	.22241	.21251	.20378	.19677	19061	.18493	18012	17559	17105	14427	16102	15786	.15502	.15220	.14957	.14710	.14468	14248	12041	13620	13430	13253	.13074	.12905	12566	1 24 30	12289	12148	.12014	.11879	11756	11629	11305	11279	.11173	.11064	10960	10861	10460	10574	10483	10395	10307	10226	.10142	.10062	*8660	90660	0.098342	40140
10.01	00000		0.00	000	0.00559	0.00586	0.00614	0.00640	0.00663	0.00685	0.00705	0.00724	0.00743	0.00700	10000	0.000	0.00826	0.00841	0.00857	0.00872	0.00887	0.00000	0.00915	0.00930	0.000	0.00971	0.00984	8660000	0.01011	6201050			0.01074	0.01086	0.01098	0.01110	2211000	0.01145	0.01156	0.01167	0.01179	0.01190	0.01201	2121000	0.01234	0.01244	0.01255	0.01265	0.01276	0.01286	0.01296	0.01306	0.01317	-0.013269	16610.0
WAS CALL	05071	64.241	92002	90774	87581	.85657	.83979	.82429	.81100	.79825	.78676	.77633	10030	75743	14041	73314	72586	.71931	.71278	.70668	.10098	.69536	69027	.66515	47681	67131	66721	.66306	.65913	59569	211000	64487	64160	.63848	.63537	63250	166299	62613	62146	.61900	.61648	.61407	•61176		40510	60200	60097	.59893	59704	.59510	.59323	.59144	.58963	0.587955	77006.
-0						-	4.	9.0			6.3	5		•			1		0.1	-	1.3	4.	• •	-		2.1	2.2	2.3	2.4	2.0	000	2.8	2.9	3.0	3.1	3.2	5.0		3.6	3.7	3.8	3.8	9.0	-		4.2	6.4	*	*	4.5	4.6	4.0		24.80	
PRINT	1919	14800	13070	13366	12859	12420	.12028	.11658	.11336	.11023	10738	10478	97701	10005	00400	0030	09212	.09047	.08883	.08729	.08586	.08444	08316	19090	07050	07839	07735	16940	.07532	07246	07270	07173	06040	.07012	*6690*	.06861	88/90	06651	.06583	.06521	.06458	.06397	06539	10227	06171	.06118	.06067	.06016	.05968	.05920	.05873	.05827	.05782	0.057400	04000
15 24	4306	2004	2406-0	1406	100F-0	630E-0	400F-0	-250E-0	.160E-0	.100E-0	.630E-0	400E-0	- 3067	1005-0	73067	ADDE-D	250E-	-160E-0	100E-0	.630E-0	-400E-0	-250E-0	160E-0	1005-0	600F-0	250E-0	160E-0	.100E-0	.630E-0	2505	1406.0	100E-0	.630E-1	.400E-1	.250E-1	.160E-1	1000	400E-1	.250E-1	.160E-1	.100E-1	.630E-1	.400E-1	1406-1	100E-1	.630E-1	-400E-1	.250E-1	.160E-1	.100E-1	.630E-1	-400E-1	-250E-1	0.1605-14	1-2001

	N / S RAT10	SNR 1N DB	RATIO	DERIV PER	CONSTANT
0,100F-02	0,159765		97239	-0.012617	10342
.630F-03	0.151625	•	956	-0.008802	14824
-400E-03	0.145009	16.77	•	-0.006601	19769
.2506-03	0.138797	•	6.	-0.005604	.23284
.160E-03	0-133550	17.49	•	-0.005426	24048
.100F-03	0.128596	17.82		-0.005596	23319
.630F-04	0.124207	18.12	٠,	-0.005867	14222
*400F-04	0.120288	18.40	•	-0.006140	21251
.250E-04	0.116587	18.67	٠.	-0.006403	,20378
.160F-04	0.113362	18.91	٠.	-0.006632	19611
1006-04	0,110231	19.15	-	-0.006853	19061
.630F-05	0.107385	19.38	٦.	-0.001056	18493
-400F-05	0.104786	19.59	٦.	-0.007245	16012
-250F-05	0,102281	19.80	٦.	-0.007431	17559
.160F-05	0.100057	20.00	٦.	-0.007602	17165
.100F-05	0.097862	50.19	-	-0.007777	16780
.630F-06	0.095835	20.37	٠.	-0.007943	.16427
-400E-06	0.093957	20.54		-0.008104	16102
00-10C7-	671760	11.00	•	-0.008266	15/80
1005-06	0.030476	20.87	0.719316	-0.008417	0.155029
1306 07	0.00000	21.00	•	6,60000	17550
400F-07	0.085861	21.32		0.0000	14710
250F_07	0.084447	21.47		0.0000	14668
1605-07	0.083166	21.60		-0.000158	14248
.100E-07	0.081876	21.74		-0.009302	14027
.630E-08	79908000	21.87	٠.	-0.009442	13820
*********	0.079522	21.99	٠.	-0.009578	13624
.250E-08	0.078390	22.11	٦.	-0.009716	13430
.160F-08	0.077357	22.73	•	948600-0-	13253
. 100F-08	0.076312	22.35	٠.	-0.009981	13074
.630F-09	0.075324	55.46	٠.	-0.010112	12905
-400F-09	0.074389	22.57	٠.	-0.010239	.12744
.250F-09	0.073456	22.68	•	-0.010369	12585
-1606-	0.012602	22.78	٠.	-0.010491	0.124387
00F-0	0.071733	22.89	٠.	-0.010618	.12289

TABLES
MONITOR
PATTERN
EYF
BASFBAND

	PSEUDO E	TABLE FOR AIDR EQUALS PSEUDO ERROR RATE EQUALS		1.0 / 2800.	
PATE	RATTO	SAR TA DB	A / D 8ATTO	DERIV PER	CONSTANT
2.630E-10	0.070909	22.99	0.641402	-0-010741	0-121486
0.400E-10	0.070125	23.08	0.638488	-0.010861	0.120143
7.250E-10	0.069340	23.18	0.635371	-0.010984	0.118798
0.160F-10	0.068618	23.27	0.632504	-0.011100	0.117561
9.100F.10	0.067881	23.37	0.629579	-0.011220	0.116299
.630F-11	0.067179	23.46	0.626792	-0.011337	0.115097
0.400E-11	0.066510	23.54	0.624133	-0.011452	0.113950
0.250E-11	0.065838	23.63	0.621464	-0.011569	0.112798
7.160E-11	0,065218	23.71	0.619001	-0.011679	0,111736
2,100F-11	0.064583	23.80	0.616480	-0.011793	0.110648
9.630F-12	0.063977	23.88	0.614072	-0.011905	0.109609
2.400E-12	0.063396	23.96	0.611768	-0.012014	0.108616
0.250E-12	0,062812	24.04	0,609449	-0.012126	0,107615
0.160E-12	0.062272	24.11	0.607304	-0.012231	0.106690
0.100E-12	0.061718	24.19	0.609103	-0.012341	0.105740
0.630F-13	0.061187	24.27	0.602996	-0.012448	0.104831
0.400E-13	0.060679	24.34	0.600979	-0.012552	0.103959
0.250E-13	0,060165	24.41	0.598936	-0.012659	0.103079
0.160E-13	0.059689	24.48	0.597046	-0.012760	0.102264
	0.059200	24.55	0.595103	-0.012866	0.101426
0.630E-14	0.058730	24.62	0.593238	-0.012968	0,100621
	0.058279	24.49	0.591447	-0.013069	0.099849
7.250E-14	0.057823	-	0.589636	-0.013172	0.099067
7,160F-14	0,057400	24.82	0.587955	-0.013269	0.098342
7.100E-14	0.056964		0.586224	-0.013371	0.097595

* HALF OF THE MORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	EYE I.E., DECISION LEVEL. RSYMBOL INTERFERENCE TO D RATIO.	SIGNAL RATIO.	= ADAPTIVE THRESHOLD AMPLITUNE TO D RATIO. = DERIVATIVE OF PSEUDO FRROM RATE WITH RESPECT TO A / D RATIO.	= OUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN RITE RATE = 12552500, AND ERROR SIGNAL DIVIDER RATIO INTO DA CONVERTED
- HALF OF THE NORMA	= AMPLITUDE OF INTE	E SIGNAL POWER TO N		
SOMENCLATURE:	4139	S.P S PATTO	SEST DER WRT	TIME CONSTANT

10035	14374	2010	00161	01627	10667	.22598	.21552	.20591	19744	19061	18448	17917	17449	17011	144.20	 06701	1661.	15599	15243	.15018	.14744	.14489	.14251	.14016	.13803	.13589	.13388	13198	.13010	.12839	.12665	10521.	.12346	.12191	.12050	.11905	.11769	.11638	11508	.11388	11206	06111	0.110389		10710	1041	10422	10425	10335	.10243	.10155	.10011	.09985	90660	.09825	-09747	.09672	.09597	.09526	.09454
01300	00000		000000	0.00578	0.00559	0.00577	0.00605	0.00633	0.00660	0.00684	0.00707	0.00728	0.00747	0.00747	100	2000000	0.00820	0.00836	0,00853	990000	0.00685	0.00000	0.00915	0.00931	6,000.0	0,000,0	0.00974	0.00988	0.01003	0.01016	0.01030	0.01043	0.01056	0.01070	0.01082	0.01096	0.01100	0.01121	0.01133	0.01145	01120	0.01170	128110-0-			0122	01240	0.01251	0.01262	0.01273	0.01284	0.01295	0.01306	0.01317	0.01328	0.01338	0.01349	0.01359	.01369	01380
973221	90040		00000	4776	26006	87967	.86104	84478	82977	. 81690	80455	.79342	78331	77360	14601	17073	7/00/	74149	13442	.72808	.72175	.71585	.71032	. 10488	\$6669	66769	69033	.68894	68188	.67761	.67359	.66979	.66619	.66260	65931	.65597	.65280	.64978	.64676	.64398	64115	63845	19364	40000	42864	42413	47300	42165	61997	.61744	61540	.61344	.61146	.60963	.60775	.60595	.60421	.60246	. 60083	. 59915
100F . TABI	3				•	-	4.	9.	3.9	2.	4.	9.6	8	-			•		•	:		*	٠.	۲.	8.	2.0	2.	2.2	4.2	2.5	9.2	1.7	2.8	5.9	0.	-	3.5		4.	5	9		9 6							:			:				•	2.0	-	-
15453	14484	1007		7706	1671	12435	11021	11632	11274	10962	10659	10384	10133	09890	00478	 2000	10760	09060	80680	.08749	.08290	.08441	,08302	.08166	.08042	.07917	.07800	06920	.07580	.07480	.07379	.07284	.07193	.07103	.07020	.06936	.06857	.06781	06705	.06635	00000	96490	2 :	10000	04248	96190	06130	06074	12090	.05968	.05916	.05867	.05618	.05772	.05724	.05679	.05635	.05591	.05550	.0550
JUNE 15 11 343	A 30F	2004	0	0-2067	1005-0	100E-0	630E-0	-400E-0	250E-0	.160E-0	.100E-0	630E-0	400E-0	250F-0	140E	0-1001	0-2000	0-300	-220E-	.160E-0	.100E-0	.630E-0	0-3UU+	.250E-0	.180E-0	.100E-0	.630E-0	400E-0	-250E-0	.160E-0	-100E-0	-99E9.	0-300+*	.250E-0	.160E-0	.100E-0	.630E-1	- 400E-1	-250E-1	-160E-1	100-1	.630E-1	2000	1000	1006	A 30E	400F-1	250E-1	.160E-1	-100E-1	.630E-1	-400E-1	-250E-1	-160E-1	-1006-1	.630E-1	.400E-1	.250E-1	-160E-1	1006-1

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0.154538 16.22 0.973221 0.140238 17.64 0.960941 0.134225 17.64 0.960941 0.1249148 17.78 0.9609429 0.1249148 17.78 0.960929 0.1269148 17.78 0.960929 0.126924 18.41 0.87573 0.106524 19.45 0.816903 0.106595 19.45 0.816903 0.106595 19.45 0.741690 0.096808 20.10 0.741690 0.096808 21.10 0.741690 0.096808 21.10 0.741690 0.0981642 21.10 0.728187 0.081642 21.10 0.728187 0.081642 21.10 0.728187 0.081642 21.10 0.728187 0.081642 21.10 0.728187 0.081642 21.47 0.728187 0.081642 22.41 0.699818 0.075804 22.41 0.699818 0.075804 22.42 0.6691900 0.075804 22.42 0.669190	TIME
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0.140238 17.06 0.944082 0.1291425 17.06 0.9622695 0.129146 17.06 0.9022695 0.124356 18.11 0.879673 0.116321 18.41 0.861047 0.116322 18.40 0.864799 0.106595 19.45 0.816973 0.106596 19.45 0.793426 0.106596 19.45 0.793426 0.106596 19.45 0.765013 0.096774 20.46 0.756538 0.096717 27.00 0.096717 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.096901 27.00 0.0976906 22.00 0.076906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00 0.0778906 22.00	0.143761
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0.129148 17.78 0.900929 0.124356 18.11 0.861673 0.106321 18.41 0.864789 0.116321 18.45 0.864773 0.109624 18.46 0.864773 0.109624 19.47 0.778429 0.098675 10.48 0.778626 0.098675 20.29 0.778613 0.098675 20.48 0.778619 0.098678 20.89 0.778619 0.098678 20.89 0.778619 0.096780 20.89 0.778619 0.087662 21.60 0.778619 0.087662 21.60 0.728687 0.087662 21.62 0.728687 0.087662 21.62 0.728687 0.078603 22.63 0.696957 0.078604 22.75 0.696957 0.077690 22.26 0.677612 0.077696 22.27 0.666192 0.077896 22.27 0.666192	2570
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0.120111 18.41 0.861047 0.116321 18.41 0.864749 0.110452 18.40 0.824773 0.10452 19.70 0.816903 0.10452 19.40 0.816903 0.104534 19.47 0.75503 0.09674 20.48 0.75503 0.09674 20.48 0.75503 0.09674 20.48 0.75503 0.09670 20.48 0.75503 0.08740 20.48 0.75603 0.08740 21.47 0.724087 0.08162 21.40 0.724087 0.08162 21.40 0.724087 0.08162 21.40 0.724087 0.08740 22.41 0.69997 0.075804 22.41 0.66192 0.075804 22.41 0.66192 0.077840 22.42 0.677612 0.077840 22.41 0.66192 0.077840 22.41 0.66192 0.077840 22.41 0.66192	0.225983
0.116321 18.49 0.84.789 0.116321 18.49 0.84.789 0.112742 18.49 0.816478 0.106595 19.45 0.816478 0.106595 19.45 0.816478 0.106595 19.45 0.8164595 0.106595 19.45 0.8164595 0.106595 19.45 0.10659	0.215520
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0.109624 19.70 0.819903 0.106595 19.45 0.793426 0.101330 19.89 0.793426 0.098908 20.29 0.765913 0.096774 20.29 0.765913 0.09674 20.46 0.765913 0.092674 20.46 0.765913 0.092674 20.46 0.765913 0.092674 20.46 0.765913 0.093085 21.00 0.724649 0.087492 21.16 0.724697 0.081662 21.45 0.715929 0.081662 21.45 0.715929 0.081662 21.45 0.715929 0.075904 22.16 0.699957 0.075904 22.16 0.699957 0.075904 22.16 0.699957 0.075904 22.16 0.699957 0.075904 22.16 0.699957 0.075904 22.16 0.699957 0.075904 22.16 0.699997 0.075904 22.20 0.67990	0.197449
0.106595 19.45 0.804554 0.103844 19.67 0.793426 0.103844 20.10.67 0.778609 0.096908 20.10 0.778609 0.096757 20.29 0.778609 0.096757 20.48 0.756538 0.092674 20.48 0.756538 0.085901 21.32 0.728629 0.081662 21.62 0.728629 0.081662 21.62 0.728689 0.081662 21.62 0.71857 0.081662 21.62 0.71857 0.081662 21.62 0.728689 0.081662 22.63 0.699957 0.076900 22.16 0.699957 0.075804 22.16 0.699957 0.075804 22.16 0.699957 0.077806 22.26 0.699957 0.077806 22.27 0.66192 0.077806 22.26 0.667901 0.077806 22.26 0.667901 0.077806 22.26 0.667901 0.077806 22.26 0.667901	0.190646
0.103844 19.47 0.794.26 0.101330 19.89 0.793.21 0.098.77 20.29 0.756.39 0.096.74 20.48 0.756.39 0.0926.74 20.48 0.756.39 0.0926.74 20.48 0.756.39 0.087.49 21.16 0.754.29 0.087.49 21.16 0.756.29 0.087.40 21.16 0.728.42 0.089.40 21.26 0.728.69 0.080.42 21.45 0.704.88 0.0710.07 22.78 0.699.97 0.075806 22.26 0.075806 22.21 0.681.58 0.075806 22.21 0.681.58 0.075806 22.21 0.681.58 0.075806 22.21 0.681.58 0.077806 22.25 0.077806 22.26 0.077806 22.27 0.077806 22.26 0.077806 22.26 0.077806 22.75 0.077807 22.75	0.184481
0.101330 19.89 0.783317 0.098908 20.29 0.755513 0.096874 20.48 0.755513 0.090856 20.83 0.746429 0.089085 21.80 0.744429 0.085901 21.16 0.721747 0.085901 21.16 0.721747 0.085901 21.16 0.721747 0.085901 21.16 0.721747 0.081642 21.62 0.715552 0.081642 21.62 0.715552 0.081642 21.62 0.715552 0.081642 21.62 0.715552 0.078106 22.62 0.690333 0.076906 22.28 0.6690333 0.076906 22.28 0.669790 0.071034 22.41 0.66192 0.071034 22.75 0.665192	0.179170
0.098908 20.10 0.778609 0.096757 20.29 0.765013 0.096874 20.46 0.765013 0.090858 21.00 0.74126 0.089085 21.00 0.72429 0.089085 21.00 0.72429 0.087497 21.16 0.728087 0.08462 21.62 0.718529 0.081662 21.62 0.718529 0.081662 21.62 0.718529 0.081662 22.75 0.699897 0.079176 22.63 0.699997 0.075804 22.64 0.681984 0.075804 22.41 0.6819891 0.075804 22.42 0.677612 0.077996 22.45 0.66197 0.071034 22.45 0.66197	0-174499
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0.085401 21.16 0.728087 0.085401 21.32 0.721737 0.081662 21.62 0.715929 0.081662 21.76 0.705888 0.079176 22.03 0.694996 0.078003 22.16 0.694996 0.075804 22.21 0.695933 0.075804 22.21 0.685910 0.075804 22.22 0.677612 0.077896 22.25 0.677612 0.077896 22.25 0.677612 0.077896 22.25 0.667990 0.071934 22.75 0.665192	0.152932
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0,084417 21,47 0,71852 0,0813029 21,62 0,710329 0,081423 21,76 0,699957 0,071003 22,18 0,699957 0,071003 22,18 0,699957 0,071604 22,78 0,689954 0,071864 22,41 0,681584 0,072860 22,45 0,68790 0,071936 22,75 0,669790 0,071034 22,75 0,665192 0,071034 22,76 0,665192	0.147448
0.083029 21.62 0.710329 0.081662 21.76 0.70488 0.080623 21.89 0.699957 0.078003 22.16 0.699957 0.076906 22.28 0.699333 0.076804 22.21 0.685941 0.073795 22.41 0.681584 0.073795 22.45 0.677612 0.073795 22.45 0.667900 0.071034 22.75 0.665192	0.144896
0.081662 21.76 0.70688 0.080423 21.89 0.69997 0.079176 22.83 0.699987 0.076900 22.16 0.690333 0.076900 22.28 0.695911 0.073795 22.41 0.681584 0.073795 22.45 0.677612 0.072840 22.75 0.667900 0.072840 22.75 0.667900 0.071034 22.85 0.665192	0.142512
0.080423 21.89 0.699957 0.079916 22.61 0.694996 0.078003 22.16 0.685941 0.076804 22.41 0.681584 0.077804 22.41 0.681584 0.077804 22.45 0.687612 0.072840 22.75 0.669790 0.071034 22.75 0.665192 0.071034 22.84 0.665192	0.140162
0.079176 22.673 0.694996 0.078003 22.16 0.690333 0.076804 22.21 0.681584 0.076806 22.22 0.677612 0.073795 22.64 0.677819 0.072840 22.75 0.667391 0.071934 22.75 0.665192 0.071034 22.87 0.665192 0.071034 22.87 0.665192	0.138034
0.078003 22.16 0.690333 0.078900 22.28 0.685941 0.075804 22.41 0.681584 0.073795 22.44 0.677612 0.073795 22.44 0.673991 0.071934 22.75 0.665192 0.071034 22.75 0.665192	0,135893
0.076900 27.28 0.685941 0.075804 22.41 0.681584 0.074806 22.45 0.677612 0.073795 22.46 0.677612 0.072840 22.75 0.669790 0.071034 22.47 0.665192 0.071034 22.47 0.66504	0.133681
0.075804 22.41 0.681584 0.074806 22.52 0.677612 0.073795 22.64 0.67591 0.072840 22.75 0.669790 0.071934 22.86 0.666192 0.071034 22.97 0.662604	0.131936
0.074806 22.52 0.677612 0.073795 27.64 0.673991 0.072840 22.75 0.669790 0.071936 22.86 0.666192 0.070208 23.67 0.66504	0.130107
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0.072840 22.75 0.669790 0.071936 22.86 0.666192 0.071034 22.97 0.662604 0.070208 23.67 0.659317	-
0,071936 22,86 0,666192 0,071034 22,97 0,662604 0,070208 23,07 0,659317	2501
0.071034 22.97 0.662604 0.070208 23.07 0.659317	234
0.070208 23.07 0.659317	12191
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	EN DATA LEVELS FOR THE	ON LEVEL.	ENCE TO D RATIO.		CIBLES.	RATIO	ITH RESPECT TO A / D RATIO.	ADAPTIVE THRESHOLD	ADY STATE VALUES	AND ERROR SIGNAL	
	- HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	THE THREE LEVEL EYE I.E., DECISION LEVEL.	MPLITUDE OF INTERSYMBOL INTERFERI	MS NOISE TO RMS SIGNAL RATIO.	IGNAL POWER TO NOISE POWER IN DE	DAPTIVE THRESHOLD AMPLITUDE TO D	ERIVATIVE OF PSEUDO ERROR RATE W	UASTLINEAR TIME CONSTANT OF THE	LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES	HEN BITE RATE = 12552600.	DIVIDER RATIO INTO DIA CONVEDTED .
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	PSEUDO E	REOR RATE	TABLE FOR AIDR EGUALS 0.3800 PSEUDO ERPOR RATE EGUALS 1.0 /	0.3800	
RIT FRROR	RATTO	SAR TA DB	A / D RATIO	DERIV PER	TIME
0.630E-10	0.068570	23,28	0.652802	-0.011088	0.117690
0.400E-10	0.067812	23.37	0.649785	-0.011212	0.116388
0.250F-10	0.067053	23.47	0.646765	-0.011339	0,115085
9.160E-10	0.066355	23.56	0.643989	-0.011458	0,113887
0.100F-10	0.065647	23.46	0.641155	-0.011582	0,112665
0.630F-11	79649000	23.75	0.638455	-0.011703	0.111500
0.400F-11	0.064316	23.83	0.635879	-0.011821	0,110369
0.250F-11	0,063666	23.92	0.633293	-0.011942	0,109273
0.160F-11	0.063067	24.00	0.630907	-0.012055	0.108244
0.100E-11	0.062453	54.09	0.628465	-0.012174	0.107191
0.630E-12	0.061867	24.17	0.626132	-0.012289	0.106184
0.400E-12	0.061304	24.25	0.623901	-0.012402	0,105221
0.250E-12	0.060741	24.33	0.621654	-0.012517	0.104252
0.160E-12	0,060218	24.41	0.619576	-0.012625	0.103356
0.100E-12	0.059683	24.48	0.617444	-0-012739	0.102436
0.630E-13	0.059169	24.56	0.615402	•0.012849	0.101555
0.400E-13	0.058677	24.63	0.613444	-0.012957	0.100710
0.250E-13	0.058181	24.70	0.611469	-0.013068	0.099858
0.160E-13	0.057721	24.77	0.609638	-0.013172	0.099068
0.100F-13	0.057248	24.84	0.607756	-0.013281	0.098256
0.630E-14	0.056793	24.91	0.605950	-0.013387	0.097477
0.400E-14	0.056357	24.98	0.604214	-0.013490	0.096728
0.250E-14	0.055916	25.05	0.602460	-0.013597	0.095972
0.160F-14	0.055507	25.11	0.600831	-0.013697	0.095269
0.100E-14	0.055085	25.18	0.599154	-0.013802	0.094545

Ŧ	* SIGNAL POWER TO NOISE POWER IN DECIBLES. * ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO. * DERIVATIVE OF PSEUDO ERROR RATE MITH RESPECT TO A / D RATIO. * QUASILINEAR TIME COMPAND OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE * 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER **
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* MALF OF THE MORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THREE LEVEL & DECISION LEVEL. * AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO. ** PMS SIGNAL GATIO. **	SIGNAL POWER TO NOISE POWER IN DECI DAPTIVE THRESHOLD AMPLITUDE TO DI PERIVATIVE DE PSEUDO ERROR RATE WIT NUASILINEAR TIME CONSTANT OF THE AL COOP FOR SMALL CHANGES AROUND THE AL HEN BITE RATE # 12552600. AN
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00720	13020		21848	22860	91872	20859	.19928	.19109	.18450	.17853	.17339	.16887	.16462	.16092	15731	19401	.15096	.14799	.14534	.14269	14022	13791	13364	19161	12061	12772	12801	0.124251	.12257	.12098	.11948	.11798	11661	112611	11763	11137	11021	.10903	.10790	.10682	10574	16372	10275	.10182	.10088	10005	.09913	77860	64460	00697	00500	09433	09360	.09287	.09219	.09140
01342	0000	1000		6.00578	00000	0.00625	0.00654	D.00682	0.00707	0.00730	0.00752	0.00772	0.00792	0.00610	0.00829	0.00847	0.00864	0.00681	0.00897	0.00914	0.00930	99600	29600 0	40000	24400-0	00100	2010	0.010502	0.01064	0.01078	0.01092	0.01106	0.01119	201132	0.01158	0.01171	0.01184	0.01196	0.01209	0.01221	0.01234	0.01249	0.01269	0.01281	0.01293	0.01304	0.01316	0.01327	9661090	14510	0.01301	0.01383	0.01394	0.01405	0.01415	0.01426
MAS CALL	91640	200	0240	11400	48284	86551	.84979	.83526	.82280	.81085	80008	.79030	.78091	.77259	.76439	.75682	.74982	.74299	.73685	.73073	72501	11967	0417	20407		40407	4018	68801	.68412	**089*	.67696	67348	06/030	00499	66108	.65816	.65547	.65273	.65011	.64762	516491	1076	63819	.63603	.63385	.63184	.62978	001700	16639	42223	62040	61866	.61698	.61528	.61370	.61208
MODE. TANK					1	8.7	6	9.2	9.5	1.6	6		4.0	0.5	1.0	6.0	:		4.	9.	7.7	6.0	2.		2.4		,,	2.8	5.9	3.0	3.1	2.6			3.6	3.7	3.8	3.9	0.		7.		4	4.5	9.	1.1		0 0				5.2	5.2	5.3	3.4	5.4
-			12046	12474	12011	11601	11235	10890	.10588	10296	10030	.09787	.09553	97660	.09140	.08951	.08776	•0980	.08451	.08297	.08154	02080	188/0	2447	07534	07427	07322	25	.07128	.07035	97690	10890	18290	06423	06550	06476	.06409	.06340	.06275	.06212	64190	26090	.05975	.05921	.05867	.05816	05764	27.70	05410	05575	05520	05485	.05443	.05401	.05361	.05320
15 IN DE	A SOF	2000	2606-0	140F	1006	630E-0	400E-0	250E-0	160E-0	100E-0	630E-0	400E-0	.250E-0	.160E-0	.100E-0	.630E-0	******	.250E-0	.160E-0	100E-0	630E-0	400E-0	20057	0-1001	1000	ANDE-D	250F-0	9	.100E-0	0-30E9·	400E-0	.250E-0	1605-0	-100E-0	400F-1	250E-1	.160E-1	.100E-1	.630E-1	-400E-1	.250E-1	TOOL	630E-1	.400E-1	.250E-1	.160E-1	.100E-1	-2000	250F-1	1 ANF	1006-1	630E-1	400E-1	.250E-1	.160E-1	.100E-1

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AIT FRRDA	SIN	SNR	0 / V	PE	TIME
RATE	RATTO	1N 08	RATIO	WRT A / D	CONSTANT
	14929	14.67	0.974041	01342	00720
0-630F-03	0.141847	16.96	0.962181	-0.009374	0-139206
0-400F-03	0,135465	17.36	0.945869	0.00703	18555
0.250F-03	0.129654	17.74	0.924981	0.00597	21848
160F-0	0,124749	18.08	0.904112	0.00578	22560
0.100F-03	0,120119	18.41	0.883545	0.00596	21872
0-630E-04	0.116019	18.71	0.865517	-0.006256	20859
	0,11235A	18.99	0.849791	-0.006548	19928
0.250F-04	0.108901	19.26	0.835261	-0.006829	19109
0-160F-04	0.105A88	19.50	0.822807	-0.007073	18450
0.100F-04	0,102963	19.75	0.810857	-0.007309	17853
0.630F-05	0.100305	19.97	0.800088	-0.007526	17339
0.400F-05	0.097879	20.19	0.790306	-0.007727	16887
0.250F-05	0.095538	20.40	0.780911	-0.007926	16462
0.160F-05	0.093461	20.59	0.772592	-0.008109	16092
0.100F-05	0.091409	20.78	0.764391	-0.008295	15731
0.630E-06	0.089516	20.06	0.756829	-0.008473	15401
0-400F-0	0.087762	21.13	0.749829	-0.008644	.15096
0.250F-06	0.086049	21.31	0.742996	-0.008817	.14799
0.160F-06	0.084511	21.46	0.736859	#16800°0-	.14534
0.100F-06	0.082974	21.62	0.730732	-0.009145	.14269
0.630F-07	0.081541	21.77	9.725018	-0.009306	.14022
0.400F-07	0.080200	21.92	0.719674	-0.009462	.13791
0.250F-07	0.078879	52.06	0.714407	30962	.13564
0.160F-07	0.077682	61.55	0.709636	20076	13358
0-1001-01	0.07647R	22,33	0.704835	20665	13151
0.630F-08	0.075346	52.46	0.700322	10010	.12956
0-400F-08	0.074279	22.58	0.696072	1021	.12772
0.250E-08	0,073221	22.71	0.691855	51036	12591
0-160F-08	0,072257	27.82	0.688011	01050	.12425
0.100F-08	0,071281	22.94	0.684120	01064	.12257
0.630F-09	0.070358	53.05	0.680442	0107	.12098
0-400F-0	787690"0	23.16	0.676960	01092	.11948
0.250F-09	0,058613	23.27	0.673488	0110	.11798
0-160F-09	0.067815	23.37	0.670307	0.01119	.11661
0010010			-		

# MALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE	THE THRFE LEVEL EYE I.E., DECISION LEVEL.	IS NOTSE TO RMS SIGNAL RATTO.	GNAL POWER TO NOISE POWER IN DECIBLES.	SAPTIVE THRESHOLD AMPLITUDE TO D RATIO.	RIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATI	* DUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD	JOP FOR SMALL CHANGES AROUND STEADY STATE VALUES	FEN RITE RATE # 12592600. AND ERROR SIGNAL	DIVIDER RATIO INTO DIA CONVERTER . 4.
1		4		* AD	# DE	200	2	F	6
NOMENCLATURE:	ATDR	N . RATTO			DERTV PER MAT	TIME CONSTANT			

PIT FRROR	S / Z	SNR	0 / V		TIME
PATE	RATIO	1N DB	RATIO	WRT A / D	CONSTANT
0.630F-10	0.066234	23.58	0.664002	-0-011457	0.113893
0.400F-10	0.065501	23.48	0.661082	-0.011585	0.112634
0.250F-10	0.064768	23.77	0.658160	-0.011717	0.111373
0.160F-10	0.064094	23.86	0.655473	-0.011840	0.110214
0.100F-10	0.063406	23.96	0.652730	-0.011968	0.109031
0.630E-11	0.062750	24.05	0.650118	-0.012093	0.107903
0.400E-11	0.062125	24.13	0.647625	-0.012215	0.106828
0.250E-11	0.061497	24.22	0.645127	-0.012340	0.105748
0.160E-11	0.060918	24.31	0.642813	-0.012457	0.104752
0.100E-11	0.060325	24.39	0.640450	-0.012580	0,103733
0.630E-12	0.059758	24.47	0,638193	-0.012699	0,102759
0.400E-12	0.059217	24.55	0.636033	-0.012815	0.101827
0.250E-12	0.058671	24.63	0.633858	-0.012934	0.100889
0.160F-12	0.058167	24.71	0.631848	-0.013046	0,100022
0.100E-12	0.057649	24.78	0.629784	-0.013163	0.099131
0.630E-13	0.057153	24.86	0.627808	-0.013278	0.098279
0.400E-13	0.056678	24.93	0.625914	-0.013389	0.097462
0.250E-13	0.056198	25.01	0.624002	.0.013503	0.096637
0.160F-13	0.055754	25.07	0.622230	-0.013611	0.095873
0.100F-13	0.055297	25.15	0.620409	-0.013723	0.095087
0.630E-14	0.054858	25.72	0.618661	-0.013833	0.094333
0.400E-14	0.054437	25.28	0.616982	-0.013940	0.093608
0.250E-14	0.054011	25.35	0.615284	-0.014050	0.092876
0.160E-14	0.053616	25.41	0.613708	-0.014154	0.092196
0.100F-14	0.053208	25.48	0.612085	-0.014262	0.091496

NOMENCLATURE:

HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THEFTELEVEL EYE I.E., DEFISION LEVEL.

AIDR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

N / S RATIO = RAYS NOTSE TO RATIO.

S SIGNAL POWER TO NOTSE POWER IN DECIBLES.

A / D RATIO = ADADTIVE THRESHOLD AMPLITUDE TO D RATIO.

OFRIV PER WRT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.

TIME CONSTANT = QUASILITINER TIME CONSTANT OF THE ADADTIVE THRESHOLD

LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES

WHEN RITE RATE = 12552600. AND ERROR SIGNAL

OIVIDER PATIO INTO O/A CONVERTER =